

This excerpt is taken from *Beyond Biofeedback* by Elmer & Alyce Green, 1977 Knoll Publishing Co., Chapter II: Self-regulation: East and West, pp. 197 - 218.

SWAMI RAMA

As already noted, Alyce and Dale Walters and I began research in self-regulation of autonomic processes in the mid-1960s. Through a publication of the Menninger Foundation, which is sent to psychiatric alumni, our voluntary-controls program came to the attention of Dr. Daniel Ferguson, at that time, chief of the medical hygiene clinic of the Veterans Administration Hospital in St. Paul, Minnesota. In the fall of 1969 Dr. Ferguson telephoned me and said that he had become acquainted with a yogi named Swami Rama, who had demonstrated in the hospital an ability to obliterate his pulse. Dan suggested that with our psycho-physiology equipment it might be possible to obtain a record of what the Swami was actually doing. Would we like to conduct such a project? If we were interested, he would take the responsibility of bringing Swami Rama to the laboratory for a couple of days. Our lab schedule was fully booked at the time, and Swami Rama tended to travel only "when the spirit listeth," but arrangements were finally made and over the Easter weekend, March 28-30, 1970, a number of experiments were performed.

During the first day we familiarized the Swami with the routine of being wired up and had a chance to become acquainted with him. He was forty-five years of age, tall and well built. He reminded me of an Italian Renaissance nobleman. At six feet one inch and one hundred and seventy pounds, and with a lot of energy for debate and persuasion, he was a formidable figure. Uncertain about what he intended to demonstrate and not wanting to upset him with demands, we asked him to tell us what he would like to do.

On the second day, Sunday, we attached a minimum number of transducers to the Swami's body in order to minimize the laboratory-induced "electric chair" effect. The Swami said he would cause the left side of his right hand (hypothenar eminence) to increase in temperature several degrees above the right side (thenar eminence). Thermistors were attached to the palm of the right hand, and an electrocardiographic signal was obtained from between the right ear and the left wrist. Alyce and I remained with the Swami in the experimental room (located about fifteen feet from the polygraphy room) and noted that during this demonstration he did not move his hands. They were placed palms up on a board in front of him.

Figure 6 shows what happened in this hand-temperature experiment. The Swami increased the temperature difference between the left and right sides of his hand in two stages. The first began shortly after the arbitrary zero time and the second started when he said, "Be attentive, I will do something." The thermistor on the little finger side of the hand (labeled "W" for warm) started at a temperature of 90°F and after a few minutes had drifted up to 91°F. The temperature of the thermistor on the thumb side of the hand (labeled "C" for cool) started at about 88°F and after a few minutes had drifted up to 89°F.

The Swami and I had been talking about blood-flow control just before the zero time of the graph. I said that it was about time for us to start this experiment, and he answered abruptly. "I have already begun." Associated with our polygraph record was a voice-actuated relay which

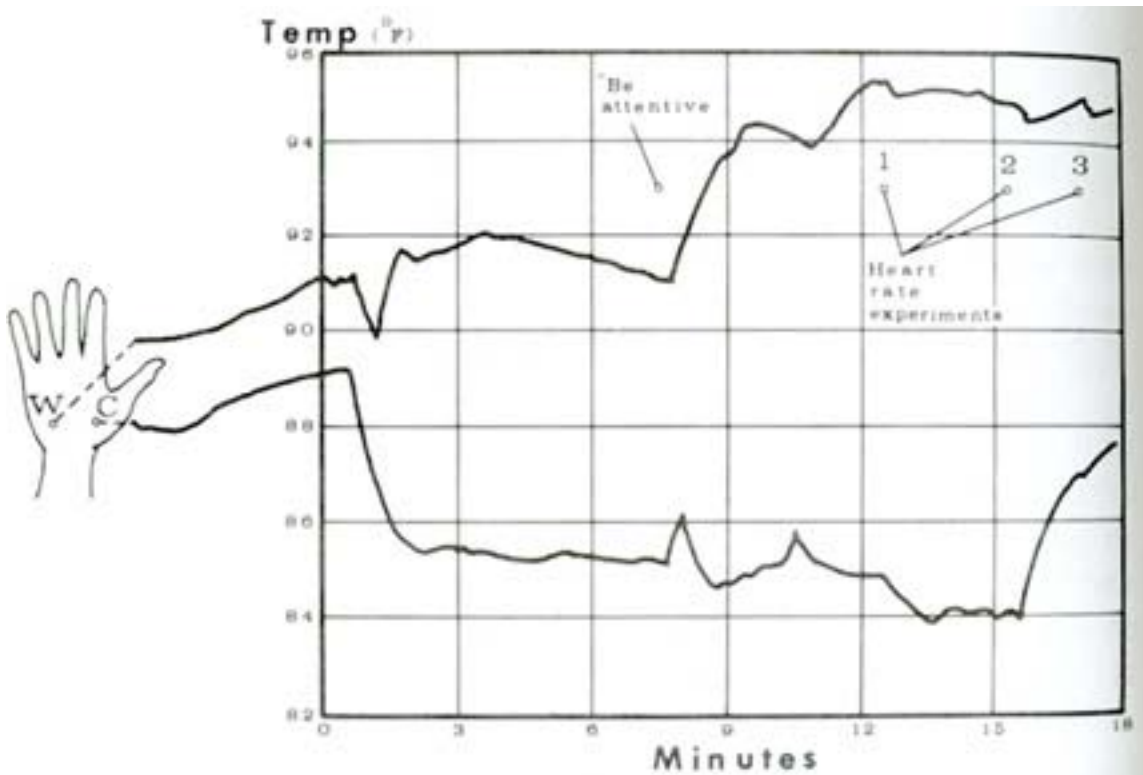


Figure 6. **Simultaneous warming and cooling of the hand.** Swami Rama's demonstration of voluntary control of blood flow in the right hand caused the left side to become pink and the right side gray. The three heart-rate experiments are shown in Figure 7.

made a mark on the edge of the record so that we could identify places where talking occurred. When we later looked at the record, we noticed that where he said he had already begun, deviations had started in the record. In the first minute the temperature dropped in both thermistors. Then the W thermistor reversed and went up to its original reading and the C thermistor continued to drop. After three minutes they were about 7°F apart.

We continued talking for a few minutes. Suddenly the Swami said, "Be attentive, I will do something." Caught by surprise, I said over the intercom, "Be attentive." I could not think of anything else to say and did not know what he was going to do.

The record shows that the temperature began going up at both locations on the palm of his hand, and then the thermistor went down to where it had been but the W thermistor kept increasing in temperature until it reached 95°F. Eventually the two thermistors were 11°F apart, an increase of 9°F over the original temperature difference. The Swami told us that this differential control of temperature in one hand was one of the most difficult things that he had learned to do, more difficult than stopping his heart. That seemed unlikely to me at first, but on thinking about it I realized that the neural controls over the radial and ulnar arteries in the wrist and over the arterial shunts in the hand probably were located within a few millimeters of each other in a section of the central nervous system. The Swami's demonstration showed exquisite differential control over this normally uncontrolled piece of the neural apparatus.

After talking another two or three minutes, the Swami abruptly ordered, "Test my heart immediately." A few minutes later he said, "What is my heart doing now?" I labeled these on the records as "heart rate experiment #1" and "heart rate experiment #2". They were the Swami's experiments, not ours. He already knew what he could do, and apparently was calibrating our laboratory for his own information. Shortly after the second heart-rate experiment he said he wished to be released. Thinking that he wished to be released from the necessity of maintaining the temperature difference between the two spots on his hands, I said, "You can now relax the temperature control of your hands." Shortly thereafter the record showed that the temperature of the C thermistor began to increase

The third heart-rate experiment might be called ours; at least, we requested it. Dale Walters called over the intercom and said, "Ask the Swami to slow his heart." The Swami heard that and said, "I will do it."

Heart experiment #1, increasing the rate momentarily, was interesting, but I was not particularly impressed by it, because I had noticed that I could do this myself. Experiment #2 was much more difficult, the Swami said, because of the sudden change that takes place in the heart. Experiment #3, was impressive, because most Westerners, even if they can speed their hearts, cannot start at a normal resting rate and decrease it by twenty-one beats in one minute, at will.

With reference to Experiment #2 by coincidence the Swami was "doing something with his heart," thereby making it possible for us to observe an unusual occurrence. Our cardiometer (for recording heart rate) can be switched to direct display of the EKG signal, and it happened that just a few seconds before the Swami asked for his heart to be monitored, Dale Walters in the control room had switched the cardiometer to direct display. The normal *flub-dup, flub-dup* of the heart, heard through a stethoscope, is seen on an oscilloscope or an EKG chart as R and T waves, shown by arrows on the diagram, above the rate record. In the normal heart record, using the electrical pickup from right ear to left hand, the R wave is taller than the T wave, as shown in the diagram. But note that just before the heart rate suddenly increases, the T wave becomes larger than the R wave. Since the T wave and the R wave represent functions of different parts of the heart, the record indicates that the Swami had developed differential control over sections of the heart, just as he had developed differential control over blood flow in his hands. We mentioned this to the Swami, who said only that this particular demonstration was somewhat risky.

After concluding the laboratory work on Sunday, Alyce and I invited Dr. Ferguson and the Swami to dinner with us at a local smorgasbord place. While chatting about yogic methods for self-regulation, the Swami surprised us by saying, "I am sorry I didn't stop my heart for you. I know you wanted to see that."

"Oh, that's all right," I said, "you can do it next time."

"No, will do it tomorrow."

"But you can't do that," explained Alyce. "You just finished telling us that a person shouldn't stop his heart unless he has fasted for three days. And here we are eating dinner."

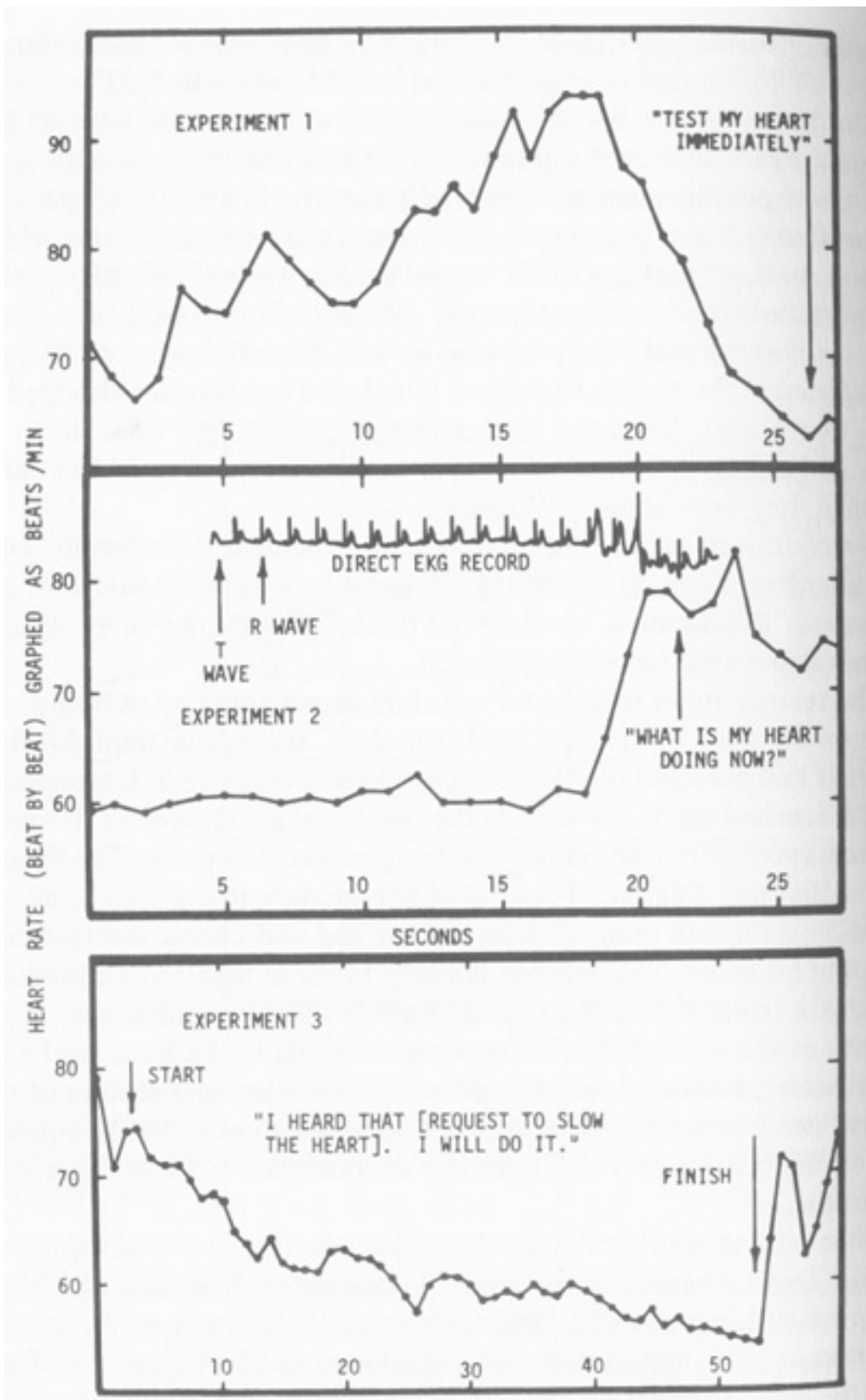


Figure 7. **Voluntary heart control.** Swami Rama's first two demonstrations were unexpected. He asked for heart information. The third "experiment" was requested by Dale Walters over the intercom.

"That's all right," he said, "I want to find out what I can do. Anything I can do with three days of preparation, my teacher can do in three seconds without any preparation. I have never been wired up like this before, and I would like to find out what I can do."

We attempted to dissuade him, but the Swami was insistent. "I'll sign papers saying that the Menninger Foundation is not responsible for my death," he said, somewhat haughtily. Nothing we said impressed him. At last we gave up. "Don't worry," he said, "I know what I am doing. I can stop my heart for three or four minutes, and also do something no other yogi can do. I can carry on a conversation at the same time. How long a time would be required to demonstrate heart stopping on the machine, since I have not fasted?" I said we would be very much impressed if he did it for ten seconds.

We had earlier scheduled Swami for a lecture in the research department the next morning at ten o'clock; then he and Dr. Ferguson were to catch a plane back to Minneapolis. I called Dale that night and told him we would try to run the "heart-stopping" demonstration at nine o'clock in the morning.

The next day, as I was taking Swami Rama with wires draped over his shoulders into the experimental room, he turned and said to Alyce, "When my heart stops, call over the intercom and say, 'That's all.'" I asked why he wanted that, and he said, "Since I am not prepared in the ordinary way for this experiment, I do not want to do it too long. I want to be reminded to stop so that I will not forget what I want to do. I do not want to damage my subtle heart." I asked him to explain that, and he said that the heart seen in surgery is only the physical appearance of the heart. The way he described it, the real heart is a large energy structure of which the physical heart is only the dense section.

These two statements by the Swami—that he wanted to be reminded not to stay in the state too long and that he did not want to damage his subtle heart—seem very significant. That he wanted to be reminded of what he was doing implied to me that when he "put" himself into the state in which the "heart stopped," he might be unaware of what his conscious intentions were. In other words, in order to exert control he was going to try to be conscious in a state that was normally unconscious. Heart patients demonstrate many peculiar stress-related heart behaviors, but not with conscious control; the heart is under the control of unconscious mechanisms in the subcortical areas of the brain, I sometimes tell these people that they are "half yogis." By reacting to stress in a certain way they cause heart problems, but, unlike the Swami, they do not know how to go into the normally unconscious domain and straighten out the problem. What the Swami was proposing to demonstrate was, in my estimation, of considerable significance to psychosomatic medicine. Not only could the Swami get into this "somewhat risky" state, but presumably he would get out of it. The question I planned to ask Swami was "How did you get into that state, and how did you get out of it?"

The Swami's second statement, about the subtle heart, is representative of the general yogic idea of the subtle body, of which the physical body is supposedly a representation in the sensory domain. Since this subtle heart is allegedly controlled by mind, the demonstration would be consistent with the field of mind theory that we had been thinking about.

The experiment was about to begin. I was the only one in the experimental room with the Swami. Dale Walters, Alyce, and Dr. Ferguson, and later Dr. Sargent and a few other observers, were in the control room. I seated the Swami in the large armchair, which was barely big

enough for him to sit in the lotus position—legs crisscrossed and folded so that the topsides of his feet rested on his thigh—and began talking about heart control. Presently the Swami said that he was going to be quiet for a moment in preparation for the demonstration. Then he said, “I am going to give a shock, do not be alarmed.” I thought that he was going to shock his nervous system in some way, but later he said he meant that he was going to shock the doctors and the others in the polygraph room watching the paper record, and he did not want to frighten them.

We sat silently for perhaps two minutes. Then, to my surprise, I heard Alyce say on the intercom, “That’s all.” I was surprised, because the Swami had not twitched so much as an eyelash to indicate that he was conducting his demonstration. After a short period of time he drew in his solar plexus for a few seconds, then exhaled and looked at me. I could tell from his expression, the glint in his eyes, that from his point of view the demonstration had been a success.

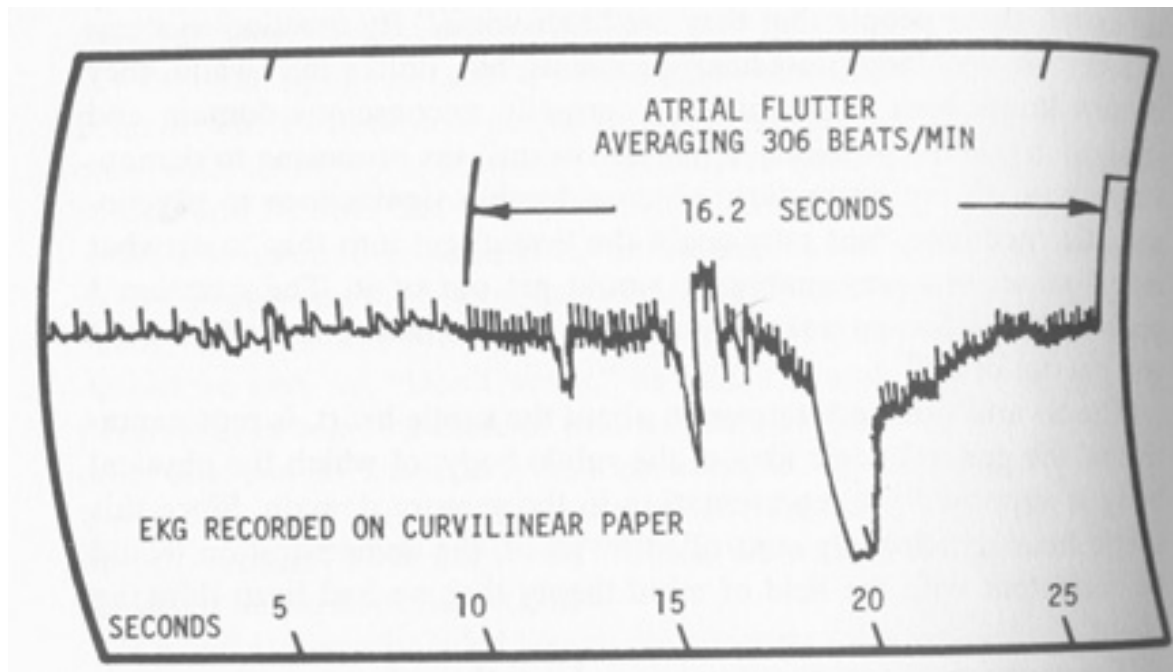


Figure 8. Stopping the heart from pumping blood. Swami Rama was motionless during the demonstration. After 16.2 seconds of “atrial flutter” Alyce called over the intercom and said, “That’s all.” Then the Swami drew in his diaphragm, and the resultant muscle tension drove the pen to the edge of the EKG channel. Erratic movements of the pen during the 16.2-second period of atrial flutter were caused by invisible muscle tensions.

I began asking how one stops the heart when Alyce called over the intercom and said, “The heart record does not look as we had anticipated. I think you should look at it.” I excused myself and went into the control room, and was surprised to see the record shown. Dr. Sargent said that it appeared to be a kind of fibrillation. All of us had previously thought that if Swami succeeded in his demonstration the heart would miss a few beats, and the pen would draw a straight line.

I returned to the experimental room and told Swami that his heart had not stopped in the way we had expected but instead had begun beating at five times its normal rate. He looked puzzled, then said, “Well, you know when you stop your heart this way it still flutters in there.” He fluttered his hands in demonstration. We had not known that, but in retrospect I could easily see

that the Swami's method, which causes obliteration of the pulse, might be identified as "heart stopping" by observers not using the EKG machine.

Dr. Sargent felt it might be useful to show the records to a cardiologist at the Kansas University Medical Center. He contacted Dr. Marvin Dunne, Dr. Dunne showed us slides made from patients' EKG records in which the same phenomenon was demonstrated and identified the state as "atrial flutter." A section of the heart "flutters" (he happened to use the same word as the Swami used) in an oscillatory mode at its maximum rate, the chambers not filling properly, the valves not working properly, the blood pressure dropping. Suddenly he stopped and said, "What happened to this man, anyway?" "Nothing," I answered. "We took his wires off and he went upstairs and gave his lecture."

Swami Rama and Daniel Ferguson returned to Minneapolis that afternoon, and our lab began to return to normal. Before the Swami left, however, he agreed to return for an extended series of experiments. He said that his teacher had asked him to come to the United States to demonstrate to medical people that the mind can control the body and he would come back for further demonstrations.

Two weeks later he sent me the following letter:

April 16, 1970

Most Blessed Dr. Green,

Thank you very much for your sincere efforts in promoting the Truth. I like to give you a few suggestions for the future tests, in the Lab.

I.) Methods of concentration and Meditation

- a. Gaze outside in distance or one foot in distance.
- b. Gaze on the tip of the nose, on the nostrils, gaze on space between the two eyebrows.
- c. Concentration on different chakras, and if possible, the variation of the stability of mind can be recorded according to the plexus, and I want to know the brain waves.
- d. Concentration with breathing will be very fruitful. Inhalation in the bellows.
- e. Rhythmic breathing in retention and in making breathing finer.
- f. Concentration on a very minute object within. Concentration on a very big and wide object.
- g. Concentration on withdrawing the senses from outer objects. Concentration in nothingness. Concentration towards negativity. Concentration on positive thinking. Concentration on assimilation the forces of mind. Concentration on expanding the mind. Concentration on the control of conscious mind. Concentration on silencing the conscious mind and bringing forward the subconscious mind.
- h. Studying the mind and heart completely in conscious condition.
- i. The effects of samadhi can be demonstrated if you have any machine to test.
- j. Samadhi with seed and without seed.
- k. Samadhi in a plastic capsule which should be sealed, or samadhi in buried condition.

2.) Heart Tests

- a. Slowing down beats to twenty and immediately jumping to 250.

- b. Complete stoppage of heartbeat without muscle contraction.
 - c. Complete stoppage of heart from one and one half to three minutes with will power.
 - d. Heart stop through rhythmic way of pranayama by controlling vagus nerves.
 - e. Heart stop with lowest temperature can be examined.
- 3.) Blood Flow, Temperature, on the Right Side of Body and Reversing Up to Two to Three Degrees Fahrenheit.
- a. Creating artificial tumors and dissolving them with will power.
 - b. The Blood Cell Experiment.
 - c. Piercing the needle on any part of flesh without bleeding or any damage.
4. Respiratory Tests
- a. You can make mask for nostrils and mouth and verify the retention of breath.
 - b. There should be two masks; one for nose and mouth, and another for the eyes. So that close up to ten feet object can be located after closing the eyes, or any book can be read. Note: There are four methods in seeing the things after closing them. The first: after closing the eyes, anything can be visualized clearly at any distance, but eyes should be properly sealed and closed.
 - c. Through touching the closed envelope can be read, but eyes should be closed.
 - d. Anything can be read from one room to another, but eyes should be closed.
- 5.) Moving Things From One Place to Another
- a. All the spiritual and psychic as well as physical demonstration will be done in the lab ONLY, and not before or definitely not in public lecture. Those who are anxious to know the results should come to the lab and only lab. It should be available exclusively for Doctors and Scientists.
 - b. The experiment of Prana-Solar Science can be done on sunny days and we will fix up the date when I come.
 - c. I thank you very much for your achievements and I hope you keep in touch through letters before we meet.

I will be sending the lab report from London with film to you. If you wish, I will bring another Swami to give more elaborate tests in the field of respiratory system and heart and weight control.

I forgot to mention the sound experiments, which will be very interesting in studying the brain's vibrations and other internal states.

It is most amazing that people do not understand the power of mind over body. My effort is sincere and you will see that there is nothing unscientific in it. Of course, I find some difficulty in explaining certain things which I can do, but cannot explain how they are done.

Doctor, meditation alone is real life. There is nothing higher than meditation, that is my experience in life.

Please give my regards to Mrs. Green. Love little kiddies. Let me thank you again for your kind and gentle behavior. My present address will be: care of American Express, London, ENGLAND Please remember me to the members of your Lab.

Thy Own Self,
Swami Rama

We needed funds to continue the work with Swami Rama. With this letter and the results of the previous demonstrations in hand, I prepared a grant proposal for a private foundation. The funds were granted, forty-two thousand dollars over the next year to carry out the various tests and demonstrations described in Swami's letter.

Items (I.i) through (I.k) were to be demonstrations, he said, in which there would be no breathing. Item (2.d) was a demonstration he had already performed for us. Items (4.b) through (4.d) were to be performed while holding his breath. These last items reminded me of Madame Blavatsky's comment, about 1885, that to receive or transmit mental information in the most efficient way it was necessary to hold one's breath. It also reminded me of the Tibetan Buddhist idea that one can maintain a thought without change as long as one does not take a breath. That does not mean that everyone who can hold his breath can maintain constant thought, but those who can "hold a thought" may be using breath control as part of the technique.

Swami Rama returned to India after our March sessions. Alyce and I, meanwhile, were invited to organize the first Transpersonal Psychology section of the annual meeting of the Association for Humanistic Psychology, to be held at Miami Beach in September (1970). We invited Swami Rama to speak, and he accepted, arriving back in the U.S. just in time to make his presentation. After that he came to Topeka, and we began the research program described in his letter. At the very first, we conducted Swami Rama through five fifteen minutes EEG feedback sessions with alpha and theta so that he could correlate his states of consciousness with their associated brain-wave patterns. Then we began work in items (I.a) through (I.g). When he visualized "a wide object within," Swami Rama produced alpha rhythm. A focus on "nothingness" also was associated with alpha. The Swami observed, "I can tell you, alpha is nothing."

To us, the most interesting of these brain-wave experiments was the last part of item (I.g): "silencing the conscious mind and bringing forward the subconscious mind." When the Swami did that we observed theta waves in significant amounts in his brain-wave pattern for the first time. When I asked him afterward what that state was like, he said it was unpleasant and noisy. "All of the things that other people wanted me to do, all of the things that I wanted to do, all of the things I should have done but didn't do, came up and began screaming at me at the same time. It is very noisy and very unpleasant. Usually I keep that turned off, but it is useful to look in there once in a while to see what is there."

These comments were certainly interesting. The states of consciousness associated with theta waves were not obnoxious to most people we had tested. But then, unlike the Swami, hardly anyone uses a combination of repression and sublimation to bring body energies and psychic energies under control. The Swami felt that the presence of theta was not healthy because of these discomforts. Concerning his own health, we had a dim idea of the strenuous method of training he had undertaken. His comment gave us additional information on the possible kinds of awareness associated with the conscious theta state. Persons who have not repressed their physiological and psychological tendencies, for whatever reason, may not be disturbed by what is in the unconscious. But, on the other hand, if they have made no effort at all to sublimate the energies, it is probable that they have developed little self-control. This possibility would make an interesting research project.

After five weeks the Swami left for a week for lecture engagements in Chicago and Minneapolis. He was back for a few days and then off again for another ten days. Gradually it became apparent that the seminars and lectures he was giving in various cities were making it almost

impossible to keep to a laboratory schedule. Unfortunately, we conducted only about one third of the experiments outlined in his letter.

We had planned to study items (I.i) through (I.k) toward the latter part of our time together, scheduling the simpler things for the first weeks of our research and the more complex things later. In retrospect it is clear that we went at it in exactly the wrong way, at least with Swami Rama. He had been practicing his austerities before he came to Topeka and was keyed up for the demonstrations in the laboratory. If after a short period of adjustment to the research setting we had challenged him to do the most difficult things, he would have immediately attempted to demonstrate them. As it was, however, life at the laboratory became more and more boring to him, and his enthusiasm for the research began to diminish. He mentioned this indirectly on occasion, we realized later, but the significance of what he was saying wasn't immediately apparent to us. He was indirectly telling us that his ability to do things depended upon a kind of emotional activation, or excitement. It depended to some extent upon being challenged, to "put up or shut up," as they say.

For instance, one day after returning from Chicago, where he had given public lectures, he showed me a Polaroid picture in which most of his chest was obscured by a disc of pale pink light. I asked for an explanation, and he said that he had mentioned during a lecture that it was possible to turn on the subtle energy in a chakra so intensely that it would become visible to the naked eye. On hearing that, a skeptical physician in the audience had demanded that the Swami demonstrate it so he could take a picture with a Polaroid camera. The Swami said several pictures were taken and that I could keep that one. I asked him why he found it more difficult to do these things in the laboratory than in public and he responded with flashing eyes, "When I am challenged all of my powers come up and I can do everything."

The blood-cell experiment (3.b) is worth discussing even though we did not see it demonstrated because Swami did not complete the experiments planned. In explaining it he said that just before taking a blood sample we were to say, "20 percent," "40 percent," "100 percent," or "zero," or any other number. Then a drop of his blood would be extricated and put on a microscope slide and the fraction of dead white blood cells could be counted. He would kill, he said, whatever fraction was commanded at the time of the sampling.

I asked how he could kill individual cells. After long discussion ("long" because the Swami told of following procedures from the Sanskrit scriptures involving processes with which he was not totally familiar), I pieced together the following picture.

The body and the mind are both energy structures. In fact, the body is a subsection of the mind. Almost all of the body is in the unconscious, however, and thereby beyond ordinary control. In order to control cells of the body it is necessary to control "cells" of the unconscious. If one can extend conscious control over all parts of the unconscious, then all parts of the body come under control. If the mind is withdrawn from a particular section of the unconscious, the corresponding area of the body dies. That is how death is defined, according to theory. Organized tissues which are bereft of organizing mind fall back into the cosmic pool of physical matter, which is in a general state of disorganization, and the pattern gradually dissolves.

This explanation from Swami Rama is, I discovered later, essentially the same as that given by Patanjali in his Yoga Sutras, composed twenty-two centuries ago. Everything consists of "mind

and its modifications" (Taimni, 1967). I first read that sutra in 1950, but it had no particular impact at that time.

We did not get to arrange a proper demonstration of item (3.a), "creating artificial tumors," which had been scheduled near the end of the series. I can report informally, however, what the Swami did in this regard. One day Swami and I began discussing tumors. I explained our research with blood-flow control and mentioned my idea that, because the vascular "tree" in tumors includes smooth muscles in blood vessel walls – which are presumably controlled from a hypothalamic center – it seemed reasonable to hypothesize that tumors could be volitionally starved through blood-flow control and reabsorbed by the body.

"Oh yes," Swami Rama said, "all of the soft tissues of the body are easy to manipulate."

I asked what he meant. He jumped up and said, "Press on this muscle with your thumb." It was a large volume of muscle in the right buttock, the gluteus maximus, just behind the hip bone. He said, "Do you feel any lumps in there?" I said, "No", "Then he said, "Wait just a second," and he turned his face to the left, away from me for three or four seconds. Then he said, 'Feel it again."

I pressed the muscle again and discovered a lump about the size of a bird's egg in the muscle. I said, "What is that, a tense muscle, a charley horse?"

The Swami said, "No, it's a cyst." I asked, "What's in it?" He said, "I don't know." "Would you be willing to have it X-rayed?" After a pause, he said, "I don't know. My teacher said that it was possible for X-rays to make changes in cells that I might not be able to control." I said, "How about a biopsy?" He replied, "Maybe."

Then he said, "Feel it again." I pressed the muscle again and the lump was gone. I said, "It's gone." He replied, "Just a second. I will make another one." He looked to the left side again for three or four seconds, then said, "There's another one." I pressed again with my thumb and found another lump, but in a different place – up against the hipbone. It was vertically longer and also narrower, and as I pressed it against the bone it slipped this way and that, as might be expected of a cyst.

It was unfortunate that this demonstration was not done in the laboratory, where medical doctors would have been available to give their opinions. To me, it seemed to be a striking example of mind-body co-ordination.

I asked the Swami if he could produce such a cyst in an area that would be easier to observe. Yes, he said, when he was in Germany he had produced a cyst several times on his wrist for physicians. He showed me a small scar. He had given permission for them to excise of the cysts, which they still had in Germany in a bottle.

I asked what the doctors said to him when he manufactured cysts suddenly like that. "They said, 'Swami, you are a very unusual man!' " The Swami continued with a disgusted expression, "I was trying to tell them something and all they said was, 'Swami, you are a very unusual man.' They did not think about what it meant."

Now let us discuss the “moving object” experiment (item 5), which we had planned to study at the end of the series with Swami Rama. One day when one of the physicians and I were interviewing the Swami in my office, he mentioned the fact that he could move objects by mind. Instantly, the doctor said, “You mean you can do it just like that, right now?” The Swami said, “Yes, there’s nothing to it. I can do it in five minutes.” The doctor said, “Show me.”

The Swami jumped up and said, “I’ll do it in your office.” I interrupted and said, with some irritation, “I thought you said none of this would take place except in the laboratory. We are not planning any such demonstrations until next year. We are not set up to do any of this.”

The Swami looked very bothered, but said, “I have been challenged. I have to do it now.”

So the three of us went to the doctor’s office. At the Swami’s request, I hung a pencil on a string from the corner of the desk. He knelt down close to the pencil and began saying a mantra very fast, with considerable breath force. Soon the pencil rotated.

Before my colleague could say anything, I pointed out that obviously the pencil would move, if for no reason other than because his breath was pushing it. To conduct the experiment properly, I said, we would have to make certain that no air currents were involved.

The Swami jumped up and said, “All right, I will do it again.” I could set it up, he said, under laboratory conditions, and he would wear a mask to prevent air currents and would be several feet away from the object. And he would “make it move.”

I asked him when to schedule the demonstration, and there was a long period of thinking. I asked what he was doing and he said he was calculating when he would be ready. It was necessary to say his mantra many times over a period of days in order to make the demonstration under those conditions. Finally he said that he would be ready in nine days. The time was agreed upon with the doctor, but an additional five-day delay was necessary because of his patient schedules.

I arranged the experiment in a small room in the basement of the research building, blocking air vents to prevent air currents and arranging chairs so six observers and I would have a good look at the Swami and the object he would try to move

I bought some aluminum knitting needles, ground their tips to points, and glued two of them together at right angles in the form of an X. A small hole was drilled through the place where the needle intersected and the assembly was set on a vertical axle, a steel pin that extended from a plastic block. The plastic block was glued to a 360° protractor so that ‘before’ and ‘after’ reading could be taken of the position of the needle assembly. A small bead under the needle assembly provided ample friction to prevent motion due to air currents and yet was free enough to allow easy movement. I hung a floodlight from the ceiling over the lamp table on which the fixture was placed.

I questioned the Swami about the long delay required for saying his mantra. He said that it was necessary to say it 140,000 times. I asked him why so many times were necessary and he said, “Because it says so in the Sanskrit records.” I asked what would happen if he said it only 130,000 times, and he said, “I don’t know, but I am afraid to try.”

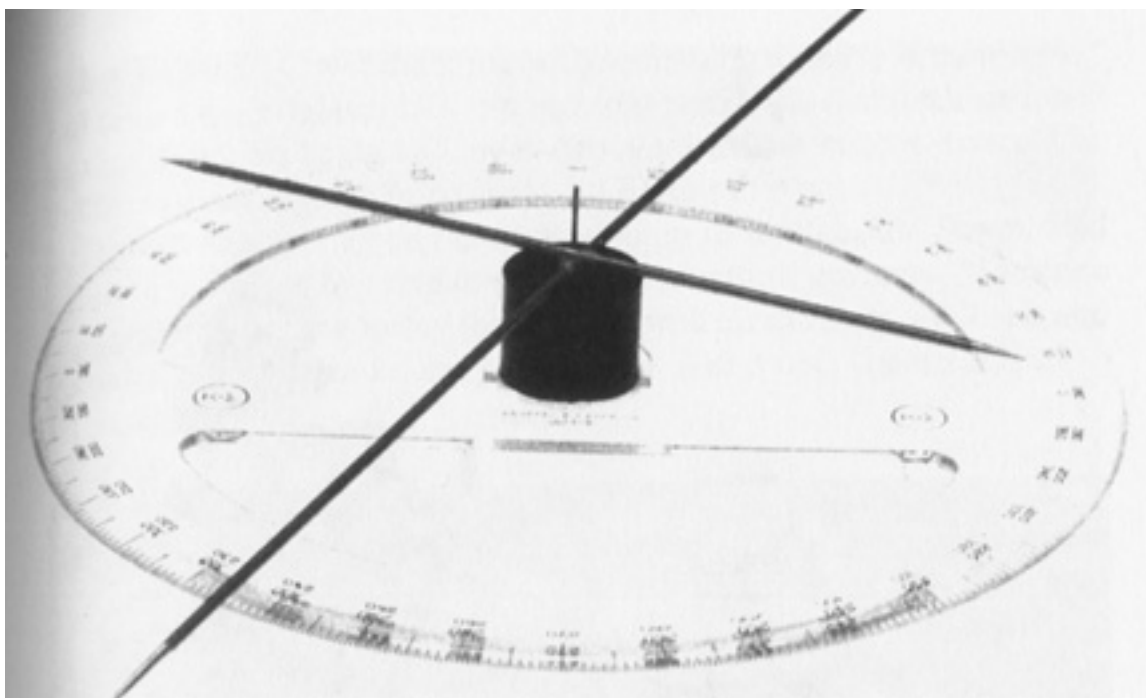


Figure 9. Needle assembly for psychokinetic demonstration. Two aluminum knitting needles (14 inches and 7 inches long) were glued together at a 90 degree angle to provide observers with a good perspective.

As the days passed the Swami was in seclusion a good deal of the time, practicing breathing exercises and repeating the mantra. Tension increased at our house every day until the day of the experiment. That morning when the Swami came out of his room he was completely at ease and said that he felt certain now that the demonstration would be a success. He said he had contacted his teacher and the teacher had said, "You have been trained to do this, do it." "But," the Swami continued, "there will be trouble about the mask."

I had obtained a painter's mask with a foam-rubber insert through which to breathe, and when I first showed it to the Swami he said that it would not be adequate.

"How could anybody complain about this?" I said, "You can't blow air through it, that's for sure."

But he said, "Cover the mask with something to make it more sure." I obtained a plexiglass plate and bolted it across the foam-rubber insert so that if any air could be blown through the foam rubber it would be deflected away and down.

Just as we were leaving the house to go to the lab, the Swami said again that there was going to be trouble about air currents. "Someone in the group is going to say that I did it with air currents. Go back and get a sheet to tie around me, up to my eyes and over the mask, just so I can see out."

We were late, however, and I knew that the participating doctors had patients scheduled immediately after the experiment. I did not want to take more precautions. I said, "I really don't care to try to cover more eventualities. There is no way to satisfy every person. I am satisfied with this mask. As far as I am concerned, there is absolutely no way in which air currents can be

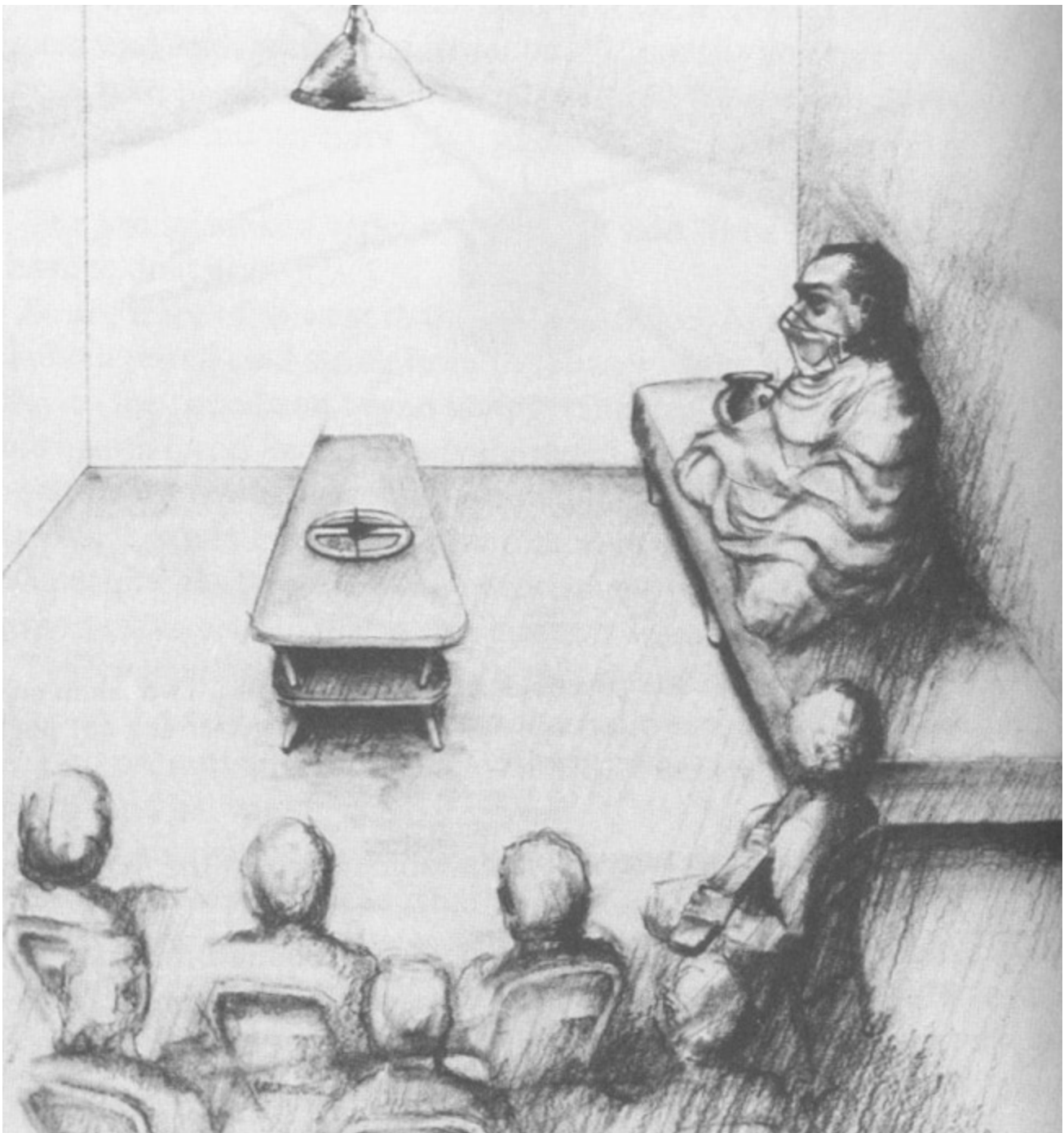


Figure 10. Room arrangements for the psychokinetic demonstration with Swami Rama.

manipulated through this mask to control the knitting needles five feet away. There isn't time to make more arrangements. Let's go." So we went to the lab.

Doug Boyd had burned a lot of incense in the experimental room for the Swami, and I hoped the observers could tolerate it.

The Swami sat with his back to the wall on the couch facing the low table with the needle assembly on it. Doug's chair was placed at the end of the couch. The Swami had asked that Doug sit there with a wooden stick to prop him up if he should fall to the left, toward the

“negative” side, he said. It was important not to touch him with the hand, only with the stick. I lit a candle that the Swami requested for focusing attention and placed it on the floor, lining it up according to the Swami’s instructions so that the flame was seen by him above the left tip of the long needle. The short needle pointed at the couch.



Figure 11. Face mask used to block air currents during psychokinetic demonstration. A foam-rubber insert in the mask, under the plexiglass cover plate, permitted respiration.

While the Swami meditated, Doug waited by the door to the experimental room and I notified the other observers to join us. I first passed the mask around so everyone could look at it and try it on if desired. They looked at the protractor and needles and sat down while I put the mask over the Swami’s nose and mouth and adjusted it. After getting into a comfortable cross-legged position and sitting silently for three or four minutes, the Swami remarked that the candle flickered sometimes (which I had noticed) and said that it was distracting him. I rose and blew out the candle. I asked him if we could record his mantra. He said no recordings could be made.

(No one would have understood any recording, in fact, because he muttered at such tremendous speed.)

After another brief silence he began. The mantra was quite long, possibly fifteen seconds, and was concluded with a loud exclamation, a word of command, at which time the needle rotated a small amount. The point he was focusing his eyes on moved toward him. We sat for a moment in silence, and then I got up and examined the needle. It had moved ten degrees.

The Swami asked if I wanted him to do it again, I said yes, and the performance was repeated. The needle moved another ten degrees toward him. We talked for a while in the group, looked at the mask again, glanced at the protractor, and went back upstairs.

I immediately sought out the doctor with whom the first "demonstration" had been conducted and asked him how he felt about this one. He said, "I believe that he did it with air currents."

"But," I objected, "air currents as an explanation are not reasonable."

He said, "Let's face it. This is probably the most remarkable person you or I will ever see. He can control blood flow in the palm of his hand, he can stop his heart from pumping blood. He can do things with his breath that you and I can't even imagine. I think he did it with air currents."

"But how?" I replied.

"How do I know? May be he bounced air off his chest."

"But", I continued, "how could he do that? He was totally covered over in his white gown—even his hands were covered."

"Don't ask me to explain, but I still think he did it with air."

Entertained by the accuracy of the Swami's prediction, I went to his office in the research building and said, "You were right, Dr. X feels that it was done with air current." Swami seemed irritated and said, "I told you so." he offered to do another demonstration, behind a large board, but Dr.X was already busy with his patients and this could not be arranged. Concerning ESP-type events, we had a number of personal illustrations with the Swami, but nothing that took place in the laboratory while he was wired up. On one occasion when Alyce, the Swami, and I were eating lunch at home, Pat Norris telephoned. She asked the Swami if she could talk to him for a few minutes at 1.30 P.M. He said yes. Turning from the phone, he asked me to find a paper and pencil for him. Then he sat on a couch in the corner of the living room and began thinking and writing while Alyce and I cleared away the dishes. I kept wondering what he was doing. Glancing his way, I noticed that he had put the piece of paper face down on a chair. Just as we were leaving to return to the office, Pat arrived.

Later that day I asked Pat what kind of conversation she had with the Swami, and she said that an odd thing had occurred. The instant she came into the house he said, "Ask me a question." She said, "What do you mean, ask you a question?" And he said, "Just ask me a question, something important." At first she could not think of anything, but finally she asked, "Should Peter (her son) go to a private school?" Then he said, "Ask me another question." and she said,

“Should I return to college to get a Ph.D.?” And he said, “Ask another question.” Pat said that he kept asking for questions until she had asked seven questions. When she was through with the last one he grabbed the paper and handed it to her. Most of her questions (and some suggestions) were written there. One was wrong and one was only partly related to the subject, but the others were correct. She said this was a real surprise.

In November 1970 I was invited to attend a conference on yoga and science, to be held in New Delhi. I did not want to go but when the Swami heard about it he said that he wanted to attend, and wanted to take some biofeedback machinery with him. I had misgivings about his leaving the United States before we had finished our research, but he was eager to go. I asked why he wanted to have biofeedback machines; he could already control physiological functions. He said these machines were going to be useful for “training young yogis and eliminating fakers.” I gathered from him that one of the main problems in India is that some people are yogis only by repute and skillful con men can generate a huge following without ever having to perform. Physiological detectors would make short work of these people, he felt. Complying, we built some special biofeedback machines for Swami to take to India in a foam-lined suitcase.

Swami Rama did not return to our lab after his visit to the conference in New Delhi. Instead, he sent a letter stating that after serious thought he had decided not to return to the Menninger Foundation. His main purpose in being with scientists could not be accomplished in the United States, he said, because he wanted to make experiments in the therapeutic use of yoga, which he felt would be easier to do in India and would be “more useful to humanity.” Swami Rama did return to the United States, however, to continue lecturing and teaching and to establish a center of his own.