

NASA Technical Memorandum 104635

Building Satellites Is Easier

Phyllis Nimmo Marsh

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National Aeronautics and
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FOREWARD

Jim Marsh joined the staff of Goddard Space Flight Center (GSFC) in 1964. Serving within the Laboratory for Terrestrial Physics, he was a prominent scientist and team leader for diverse activities including the development of GSFC's precision orbit determination capability, utilization of satellite altimetry to further the goals of ocean and geodetic science, and improving knowledge of the global gravity field. Jim had a very productive career, producing over 100 publications with more than 80 being in the refereed literature.

Jim's accomplishments included application of satellite observations for measuring the size, shape, gravitational, and tidal field of the Earth and developing models for improved orbit determination. These investigations produced both the NASA standard and internationally recognized state-of-the-art gravitational models used for geophysical and orbit determination purposes. Jim played a key role in many NASA missions including those flying altimeters (GEOS-3, SEASAT, TOPEX/Poseidon) and those used to study the properties of the solid Earth employing precision laser tracking (LAGEOS, LAGEOS-II). By fostering international cooperation and collaboration, Jim Marsh was instrumental in making satellite geodesy an international forum for multi-disciplinary science having extensive ties with astrodynamics, geophysics, geology and oceanography communities. He served as the Secretary for the Geodesy Section of the American Geophysical Union and received numerous NASA and International Awards including the NASA Exceptional Service Medal in 1980. Jim was a Principal Investigator with the GEOS-3, SEASAT, LAGEOS, LAGEOS-II, TOPEX, and Crustal Dynamics Projects.

Despite being held in high esteem by colleagues and friends, Jim Marsh committed suicide at home on the morning of June 30, 1991.

This document is a narrative of Jim Marsh's struggle to overcome a medical disorder, which was seriously complicated by a suicide attempt. It was a tragedy which involved and touched colleagues around the world and those within the NASA/GSFC community. It is also the story of a family rising to cope, support, and heal, a family member. It describes a journey of rehabilitation and frustration.

This, at times, painful story contains many important messages; included is the complex manifestations of serious head injury and trauma and the day-to-day struggle of rehabilitation. These are important lessons for preservation and improved understanding, and the motivation for this publication.

Dr. David Smith
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INTRODUCTION

Building Satellites is a story about Jim Marsh's recovery from a severe head injury told by his wife Phyllis from the moment she learned of its happening, through the ups and downs of a lengthy rehabilitation, until his return to work and daily living. It continues on, however, and narrates his battle with the more insidious Graves' disease. Told in the first person, *Building Satellites* vividly portrays Phyllis's thoughts and feelings throughout this experience with scrupulous honesty.

This is a story worth reading for many reasons. First of all, Jim was an accomplished scientist, respected by his colleagues both in this country and abroad. Secondly, it narrates the many stages of his recovery from head injury with detailed, readable accuracy; it informs us as well as inspires. Finally, *Building Satellites* also tells us the story of Phyllis Marsh's remarkable, creative response to this crisis. It narrates her personal experiences as she progresses through the strange and sometimes bizarre world of medicine and rehabilitation, guided by a few basic beliefs, which she learned as a child in Iowa, that provided her with the strength to endure. *Building Satellites* seems to reaffirm our unconscious, but settled conviction, that when confronted overnight with adversity, we are somehow given the means for coping, supported by our basic beliefs, strengthened by family and friends, and eventually learning to accept any outcome.

Jim Marsh was a remarkable man with whom we were privileged to work. He seemed to welcome the challenge of his recovery, and by his example, challenged all those around him. *Building Satellites* is a testimony to both his and his family's courage, an inspiring work which provides an example of how others might learn and grow from personal crisis.

William E. O'Donnell, Ph.D.
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January 14, 1993

I CANNOT SPIN GOLD FROM STRAW

The call came in the midst of laughter.

On Wednesday, February 22, 1989, three friends, who were also my co-workers, and I had splurged on lunch at a nearby restaurant and joked about the movie "No Way Out" with its surprises. Giggling as I opened the door to the office, I heard over the intercom, "There is an emergency call for Phyllis on line 5."

"Mrs. Marsh, my name is Hannah Shafer." The emotionless voice of the stranger provided no clue about why she was calling. "I am a social worker at Huntington Memorial Hospital in Pasadena, California."

"Uh, oh," I thought, "what has Jim done?"

"Your husband has been injured and is in surgery now," she continued. "He is in very critical condition, and you need to make arrangements to come as soon as possible. Two of his coworkers, Steve Klosko and Chet Koblinski, are here with me, and here are the numbers where we may be reached."

"But how was he injured?" I asked myself.

Jim, a geophysicist with NASA, used data from artificial satellites to study the earth. On Monday, he had left Maryland for Pasadena to attend an international scientific conference on this work. Jim was a leader in the project under discussion.

The previous two weeks Jim had been tired and depressed. His sleep patterns were disturbed; he would fall asleep but seemed unable to stay asleep. When he complained of cold legs, I guessed he had a thyroid problem. In 1970 he was prescribed radioactive iodine to cure his overactive thyroid and was told his thyroid might someday go low. He had made an appointment to see a doctor but could not get in until after he was scheduled to return from Pasadena.

Now he was in critical condition in a hospital three thousand miles from home.

I explained to the social worker that Jim had two problems the doctors needed to be aware of. For some time, he had complained of numb legs and feet, and the previous week he felt the numbness was spreading to his hands. I explained his thyroid history and asked that his thyroid be checked.

The social worker handed the phone to Steve, and I asked how Jim had seemed at the meetings. He said Jim contributed well on Monday afternoon and Tuesday morning, but something seemed to change in him on Tuesday afternoon. Several people became concerned because Jim was so withdrawn.

After relating to Steve my concern about Jim's medical problems, I asked him what had happened. He hesitated, then said, "He has been injured in a fall."

"How?" I wanted to know.

Steve covered the phone while he asked the social worker what to say. He answered, "It was from a pretty great distance."

"Like from a balcony?" I asked.

"Yes."

I did not want to know more. I told Steve I would let him know my plans, walked into the next office, and said to my supervisor, "My husband has been injured, and I need to go to California."

I then paced the floor as I began a mental list of things I needed to do.

One of my luncheon companions drove me to the credit union at the nearby Goddard Space Flight Center so I could get some cash. Another one drove me home in my car and the first one followed us. In the meantime my supervisor made plane reservations for me to leave for Los Angeles at 7:00 P.M.

On the way home, I decided to call Sylvia in Omaha. She is the wife of my brother Ken, and we call her "our own 911." She and I helped the family cope when Ken's twin, Keith, was dying of melanoma in a Minneapolis hospital. We again shared responsibilities when my father had a stroke and my mother broke her hip, and both were in a rehabilitation facility in Des Moines.

"Hello, Sylvia."

"Well, Phyllis! This is a surprise." Sylvia knows I am not inclined to pay the rates for middle-of-the-week, daytime long-distance phone calls. "Is there something wrong?"

"Well, I'm okay," I stated, "but I just got a call from California. Jim is there at a meeting and has been injured. He's in critical condition. I'm packing to leave, and I need a friend."

"You want me to come?" she asked.

"If you could. He's in really critical condition."

"Would you believe, Phyllis, I am packed ready to leave tomorrow to go to Salt Lake City to do research and my calendar is all clear. I can just change my plane tickets and leave tonight."

"Could you? I'd really appreciate it." I did not know what I would do if she could not come.

"Do you want me to rent a car?" she asked.

"Yes."

"Shall we get a motel room?"

"Yes."

"Phyllis, I had a meeting scheduled for today that was canceled. It is unusual I'm here to get your call."

We then worked out the details. We would ask Steve and Chet to find us a motel room and leave the address and phone number with the ticket agents of the airline she would be flying in on.

Sylvia planned to rent a car at the Los Angeles airport and drive to Pasadena in the middle of the night. Even though she and my brother, a retired career officer in the Air Force,

had lived and traveled many places in the United States and Europe, she had never been to Los Angeles and never traveled the LA freeways. Sylvia is a person who could conquer them for the first time under such circumstances.

She later told me that when she called my brother, his response was, "If Phyllis calls, you know it's serious, so go."

A different social worker from the hospital called and said Jim had survived the surgery. He had landed on his right hip causing a great deal of injury there. Since there was good brain wave activity, there did not seem to be major trauma to his head. His heart was very steady. The severe trauma to his body, though, had left him in critical condition.

Then she asked, "Has your husband ever been suicidal?"

"No," I said, "he has always been a very stable person."

Now I was confronted with both a medical crisis and the question of suicide. I knew, however, I needed to make arrangements to go to California, and I forced myself to think of that.

Mathew, our 20-year-old son, worked as an engineer's aide in a local laboratory and lived at home. My friend who had driven me home called him to relate what sketchy information we had. When he came home, he and I decided he would stay at home by himself.

Our daughter Melissa, a high school junior, had gone out with friends after school, and I did not get to see her before leaving. The mother of her good friend told me Melissa was welcome to stay at their home, and I knew she would be in good hands. My neighbor came over to wait for Melissa and explain what had happened.

My friends drove me to Baltimore Washington International Airport. "Jim must still be alive," I told them as we waited. "Steve and Chet know my flight number, and I figure they would stop me from coming if Jim were dead." Six and a half hours after receiving the phone call, I boarded the plane to California.

The flight took five and a half hours. Sitting alone in the first row of tourist class staring at the dark sky I had no sensation of moving. I felt like I was playing the children's game where straight chairs are lined up in a row and everyone pretends to be on an airplane. Every fifteen minutes I looked at my watch and went into the bathroom. No one questioned my strange behavior.

For five and a half hours I did not know whether I was a widow or a wife. I could not comprehend my future so I concentrated on why Jim could have done the unthinkable. Mulling over the previous weekend and the past few months, the only thing that made sense was that Jim's thyroid had shut down. "This must be a syndrome," I thought, "and they should know about it in a good hospital."

The thought of Jim's dying was unbearable.

As the plane landed at Los Angeles, the pilot came on the intercom. "Ladies and gentlemen, our gate is not ready so we will have to wait here awhile."

There I sat, desperate, with no way to bridge those last few yards so I could learn if I still had a husband.

Chet and Steve met me, and my first words were, "Is he still alive?"

"Yes."

"Then I think he can make it." I reached out to them as I continued, "And let us remember good things happened today also." I thought of Sylvia being free to come.

Chet and Steve had become involved when they returned to the hotel to see why Jim did not arrive for the morning meeting. They discovered an ambulance was taking him to the hospital and followed it.

During the time I was on the flight Jim's blood pressure could not be stabilized. Several doctors worked over him, and the situation was very critical. About two hours before Chet and Steve left to meet me at the airport Jim's blood pressure had stabilized, and they felt much more confident.

When we arrived at Huntington Memorial Hospital, it was almost 11:00 P.M.. A social worker escorted us to the intensive care unit (ICU). There a resident told me the same general information I already knew. He also indicated Jim's wrist was cut and this had caused a loss of blood. The resident began explaining all of the machinery I would see, but I had visited people in ICU before and knew what to expect. "Can I just go in and touch my husband?" I asked.

Only one spot on Jim's right shoulder seemed accessible. A pin beneath his right knee was hooked up to traction to hold his leg in place. A tube down his windpipe delivered oxygen to his lungs. Monitors measured his heart rate, his blood pressure, and the oxygen in his blood, and the accompanying machinery filled the room. An IV administered drugs and fluids. A device in his mouth held it open, and a stiff plastic collar stabilized his neck because the staff had not been able to X-ray the seventh vertebrae, and until they did so, they could not take a chance on a fracture. The nurse assured me Jim was breathing on his own.

Standing there I wondered if Jim Marsh would ever emerge from the prison he seemed to be in.

Steve and Chet insisted on driving to the airport to meet Sylvia after dropping me off at the Pasadena Hilton. "Tell her everything you know," I said, "because she is here to help me and can only do so if she has the facts." At the airport she recognized their names and was relieved that her introduction to California's freeways was not going to be a late-night drive to Pasadena in a state of shock.

Sylvia explained to Chet and Steve that she and I had climbed a couple of mountains together. "Phyllis will handle what has to be handled," she told them.

Sylvia arrived at the hotel around 2:00 A.M., and we spent the night passing each other on the way to the bathroom. If we slept at all, it was in five-minute segments.

Her first task the next morning was to confirm that Jim had attempted suicide. I had

not heard a definitive statement that convinced me suicide was the only explanation for his injuries. When the doctor had said earlier that Jim's wrist was cut, I thought it had been cut in the fall. Sylvia discovered he meant that Jim had cut his wrist before he jumped. That information created a totally different picture.

"Thank goodness he jumped," I said, "or he might never have been found alive."

This was our first "red dress day." We dressed as if we were going to an officers' wives luncheon; I wore a red wool crepe dress and Sylvia a dusty pink ultrasuede suit. Earlier medical situations had taught us to enhance our credibility by dressing up. In this strange hospital in an even stranger situation, we needed every boost we could get. For several days afterwards, the first question of the morning became "Is this a red dress day?", and when we were meeting with new professionals or wanted some specific answers, we always agreed it was.

Chet and Steve helped Sylvia rent a car, and we followed them to the hospital. The chief trauma surgeon met us in the Intensive Care Unit to explain the situation. Jim was very seriously injured; they had worked mainly to stabilize his condition in surgery. After discovering internal bleeding they had done abdominal surgery. A laceration on his liver and a break in one of the blood vessels leading to his intestines caused the bleeding but were not considered serious complications since the doctors had operated so quickly. A quick look around Jim's insides indicated good health. "What a way to have a physical!" I thought. If he stabilized enough for further surgery within the next three weeks, his recovery would be quicker because a pin could be put in his leg. If they could not operate before the three weeks, Jim would have to remain in traction and recovery would be more prolonged. There was serious concern about his lungs because of a bruise to the right one.

Because of the seriousness of Jim's injuries and because of his age, the doctor felt there was a less than fifty percent chance that Jim would live. If he lived, his recovery would take a very long time.

Because Jim had both cut his wrist and jumped, experience had taught the trauma team that he was serious about the suicide, and in similar cases an overdose of drugs often occurred. Therefore, they did a drug screen on him. Of course, it came back negative. The doctor, I'm sure, thought I was naive when I said Jim would not have known where or how to get drugs, but he lectured me saying that people find out if they really want to know. I knew my husband better than that.

Sylvia and I then had to find our way to the Pasadena Police Station. The police had conducted a complete investigation to make sure there had been no foul play and would only release Jim's belongings and money to me. But first we had to find the station.

Chet and Steve had drawn a map for us on how to get back to the Hilton from the hospital. However, they live in Maryland, and their Pasadena map did not have north in the proper place. When we showed it to the lady at the front desk of the hospital and asked where the police station was, she became confused and redrew the map on the same paper. Thus, north was where north was supposed to be as well as where it wasn't, and we couldn't walk outside and find it.

Together Sylvia and I did not add up to one, but somehow we made it to the police station. On Arroyo Parkway we crossed Colorado Boulevard (where the Rose Bowl parade is held) in downtown Pasadena and kept going for a couple of blocks, but nothing looked like a police station. Finally when Arroyo ran out, we saw an old building with a small parking lot outside and discovered the sign that told us we had arrived.

Perhaps our difficulty was not just that we were in a state of shock and had had no sleep the night before. Never did I dream I would have to go to a police station, ask to be let in (there was a security door that had to be opened before I could go upstairs), walk up to a counter, and say, "My husband attempted suicide yesterday, and I have come to claim his belongings." Maybe I didn't

want to have to say the words. Arriving a little after noon, I was told I would have to wait until somebody got back from lunch. I started crying and sat down. "I can't wait," I said. They must have sensed my state of mind because shortly somebody came with keys and gave me Jim's suitcase, briefcase, and valuables.

Retrieving Jim's suitcase from the police station unhinged me. I had packed it many times for his travels. To have something so personal land in such an impersonal place at a time when his survival was in doubt made me want to withdraw from people and try to sort things out in my mind.

But I knew I had to call Mathew and Melissa and Jim's brother and sisters. Sylvia suggested Mathew and Melissa needed to come if there was less than a fifty percent chance Jim would live. So using our map with two different norths on it, we struggled back to our hotel somewhere north, south, east, or west of the Pasadena Police Station.

I knew from the beginning I would be honest in dealing with Jim's suicide attempt. One reason was the way my family had handled the birth of my brother Duane. Born in 1952, he was the youngest of seven children. The doctors labeled Duane a Mongolian idiot, a term now outdated. Today, his condition is called Down's syndrome.

In 1952, mentally retarded children were hidden away. There was a totally different atmosphere than the one that prevails today when a man with Down's syndrome stars in a television series.

My father was the first to tell me that something was wrong with Duane and he would not be coming home with Mom.

"What's wrong?" I had asked. I was almost fourteen.

"Well," he hesitated, "he has some feeding problems."

A few days passed before my parents leveled with me about Duane, and I still remember the let-down feeling I had that my father had not been able to be truthful with me.

It parallels the scene in the movie "Rain Man" when the character played by Tom Cruise tells Dustin Hoffman's character (who is mentally retarded), "I just wish they had told me about you."

Mom and Dad still did not know how to handle the situation. "Don't say anything about it for now," they cautioned.

Walking past a neighbor on the way to the grocery store one day, I was grilled. "How's that new baby?" she asked. "I bet you are really excited."

I felt uncomfortable and marched home. "Mom," I demanded, "I want you to call and tell her exactly what's wrong with Duane. I don't know how to answer her questions, and I don't want to lie about him."

Many years later my mother told me how much I had helped her that day. She had always taught us that honesty had the highest value, and my being more uncomfortable about covering up the situation than I was about Duane's condition helped her open up. When she called our neighbor, who was Mom's good friend, the neighbor admitted she had a mentally retarded sister in the county home she had never mentioned. She said that when she took her sister out to lunch, they went to a neighboring town so no one would see them.

Our family accepted Duane as one of us. In talking about what was previously hidden, we were strengthened and helped many others, like our neighbor, unload secret burdens.

The reading I had done in my adult years and the public spectacle of the details of Richard Nixon's involvement in the Watergate affair coming out piecemeal and ruining his credibility reinforced my instincts to be open.

As Sylvia and I sat in the hotel discussing the calls we were going to make, I suddenly realized the position I had put her in. "Sylvia, I'm sorry. I forgot your dad committed suicide. This must be really awful for you."

She assured me that she had accepted her dad's death long ago and then counseled, "Phyllis, if you are open with people, you will

find those you least expect will come forward with their own stories and will comfort you in ways undreamed of." Her counsel echoed my experience, and we began notifying the family.

I wanted to tell my children. Our trust in each other comes from long years of honesty. I spoke with Mathew, but Melissa was at a school activity so I asked my friend and neighbor Peggy to tell her what had happened. Peggy and her husband agreed to help Mathew and Melissa make plane reservations to fly to Los Angeles the next day.

I did not have enough energy left to call Jim's brother and two sisters, so I asked Sylvia if she would do so. It was one of the many ways she showed her talent for friendship that week. She also called Jim's cousin Carol, who lives in Ventura. Each was told Jim had cut his wrist and jumped. We said he was in critical condition with a less than fifty percent chance of living. Each one of them learned that I thought Jim had a medical problem, most likely in his thyroid. We supplied three phone numbers where we might be reached if anyone had further questions. No matter how much any of them probed later they could find nothing I had hidden.

We were interrupted in our calls by two of Jim's colleagues delivering a basket of yellow mums. Word had gone out that we did not want visitors, but these two felt it was important to speak with us.

My guilt feelings about letting Jim come to Pasadena were just beneath my surface calm. The previous weekend we had long talks about his not feeling well and his disturbed sleep patterns. I had told him all I had read about sleep. Studies showed sleep could not be forced. Rather than lying in bed tossing and turning, a sleepless person should get up and read a book until he or she feels sleepy again. Jim kept thinking he could will himself to sleep, but it never worked. Over the weekend, he had listened to me and done some things to help himself relax.

When he left on Monday, I had felt comfortable. He was tired and feeling low, but

every person at some time has gone to work feeling that way.

Jim's colleagues were concerned that they had missed what was going on. One of them had taken Jim walking the night before because Jim was so withdrawn. Both colleagues felt Jim had seemed tired but fine until around Tuesday noon. They will never know how their honest judgment freely given reinforced my feeling that Jim had been feeling well enough to come to California on Monday.

"There was no way anyone could have known what Jim was going to do," I told them, "and we cannot waste our energy feeling guilty. We have to go forward." In my subsequent dealings with those colleagues and others, I always affirmed that same philosophy.

Sylvia and I returned to the hospital. The Intensive Care Unit was a circle with the nurses' station in the center of the configuration and individual rooms surrounding it. This circle in a square-shaped building left little alcoves in the corners where families could congregate. A phone enabled waiting family members to receive calls from others who wanted information.

We staked out our claim to the alcove outside Jim's room, and by doing some occasional rearranging of the chairs, we found it to be a comfortable place for naps, conferences with friends, and quiet reflections. A row of windows provided a view of the hills around Pasadena, and I often paced back and forth both comforted and bewildered by the unfamiliar scenery.

It was there arrangements were made for Mathew and Melissa to fly to California the next day. Chet and Steve took care of the details with our neighbors. One of Jim's colleagues charged the tickets on his airline credit card and was later reimbursed from a collection set up to help with our expenses.

Sometime that afternoon a social worker told me that when Jim woke up the next day, the three of us would discuss what had happened and begin to sort out the feelings that had led to his actions.

Some thought had to be given to where I would stay since Jim's recovery would take a long time. Again, Chet and Steve took over. A local university had furnished apartments it rented out to visiting professors and researchers. Because of the university's connection with the scientific project Jim was involved in, I would be able to rent one of the apartments. The management had not planned on my being there, but I could rent the apartments that were empty between other planned visitors. On Thursday afternoon, Chet and Steve told me the arrangements had all been worked out.

That afternoon and evening Sylvia and I visited Jim a few minutes at a time. His left leg twitched, but he did not make any other movement as we talked to him. We tried to speak normally and tell him who we were and what we were doing. The machines indicated there had been no change for the worse.

Friday morning found us still at the Hilton but with a little more sleep than the previous morning. We asked ourselves if it was a "red dress day," and we also began the routine of asking, "What are the questions for today?" Because the future was such a total question mark, it was easy for me to start worrying about how things would ever get back to normal. Such worry would overwhelm me so much I could not function. To survive, I had to separate the questions: today's questions I would work on; tomorrow's questions I forced to the back of my mind.

The projects for Friday were to move to our apartment and to speak to as many of Jim's doctors as possible. Also, I asked Chet and Steve to arrange a meeting with two close friends, Michel and Francois, French scientists who were attending the meeting. After they left for France on Friday, I would not have the chance to see them again for a long time.

I decided I needed to be honest with the people where I worked. On Thursday night I called one of the friends who had driven me to the airport and told her the truth. On Friday morning I called her at work and asked her to

tell our supervisor everything. I wanted my coworkers to know the full story so that when I returned, there would be no discomfort about the subject.

A hospital visit was always first on our agenda. Friday morning we spoke to Jim, and again there was no response. Obviously, we were not going to have a discussion that day with the social worker. It looked like he was retaining fluid, but to our untrained eyes there was nothing to indicate that anything else had changed.

The chief trauma surgeon confirmed our findings. He also said Jim's thyroid had tested normal. I accepted the information. But since I had read the previous week in a layman's medical guide that in a small percentage of cases the tests of thyroid function can read normal even when there is a problem, I knew I would insist on more tests. In the meantime I worded my response to questions carefully. "Jim's thyroid tested normal," I said.

Next came our move to the apartment. Chet and Steve checked it out and teased us about its elegance. With a key to the underground parking garage, a key to the elevator, a key to an outside security gate, and a key to the apartment, our safety was assured. There were two bedroom suites, each with private bath, and a large living-dining room in between. Double French doors led out to a patio. The kitchen was fully equipped. I called it home when I discovered the Maytag washer and dryer—my father is a Maytag retiree, and I went to college on a Maytag scholarship.

Sylvia went grocery shopping, and I stayed behind to meet Michel and Francois. The lovely apartment added a measure of stability to our meeting after the chaotic events of the last three days. It was a time to speak of an extraordinary friendship, one that reached across the barriers of language and distance. Each of them had visited in our home many times, and Jim had been a welcome guest in their homes on his many trips to France. At times we had laughed until our sides hurt; at other times we had shared the pain of parents dying and of

illness striking. Now the person who had brought us together was in critical condition under circumstances that were inexplicable. As we parted, we could only affirm that we were friends. As Michel put it, "Comrades are thrust upon you, but friends you choose!"

Later Sylvia and I returned to the ICU to find very little change in Jim. He made no response when we talked to him, and his body continued to look puffy.

As we sat in our alcove, Chet and Steve arrived bearing a bouquet of long-stemmed flowers wrapped in plastic and decorated with a big red bow. I called them "my Miss America flowers" and walked around the rest of the evening holding them as if I were walking down the platform at Atlantic City with a crown on my head. It is one of my fondest memories of those early days, and I hope I understood the meaning of the gift when I accepted it in that manner.

After some hesitation, Chet and Steve decided to go in to see Jim, which pleased Sylvia and me. There were very few people I allowed in. As I told Chet and Steve, "Jim Marsh is still a person of dignity even if he is in a coma, and I don't want people coming out of curiosity." It was necessary to identify those who were important in helping to bring Jim out of the coma and those who were not. Sylvia came and went frequently. Jim's Uncle Melvin lived in Ventura and he, along with Jim's cousin Carol, would have free access. Sylvia and I had urged Chet and Steve to go in, but they had hesitated.

I accompanied Chet and Steve into Jim's room and explained that sometimes comatose people can hear even if they do not respond; I asked them to talk to Jim as if he could hear all they were saying. It was hard to do, but they did it. Afterwards, each said it was not as bad as they had thought. Reality is often easier to accept than what the mind can imagine.

Mathew and Melissa arrived later with Carol. Since we were not in our alcove when they arrived, Carol, a registered nurse, took them in to see their father and explained all the

machinery. She shared our concern about the swelling in Jim's body.

Before leaving for the evening, Mathew, Melissa, and I slipped in to say goodbye to Jim. "Jim," I explained, "we are going back to our apartment, but we will be back in the morning." As I turned and walked to the nurses' station to make sure they had my new phone number, Melissa watched Jim's whole body react as if he were reaching out to me. Overwhelmed by seeing the first response, Melissa had to go outside and sit down with Sylvia.

Melissa later told me she had cried on the entire trip to California. Walking through the airport at Dallas she had followed blindly behind Mathew, who had become very upset with her. After seeing Jim respond, she never cried again because she felt her dad would be O.K.

We returned to our apartment exhausted but secure in the knowledge we had answered the questions of the day. We had an apartment; I had met with Michel and Francois before they left for France; and Mathew and Melissa were in Pasadena. Those were big accomplishments.

By Saturday, we almost had a routine.

"Is this a red dress day?" We decided Saturday was not.

"What are today's questions?" On Saturday we needed to find a place to buy some travelers checks. Jim had almost \$800 in cash with him, and I had taken \$600 out of the credit union before leaving Washington. Together Sylvia and I still did not add up to one, and we did not feel safe having that much cash to lose.

Other than that, we would come and go from the hospital. Cousin Carol and her daughter were coming to take Mathew and Melissa on a tour of Los Angeles. We needed to be at the hospital to meet them.

Our alcove was like Grand Central Station. Carol came to pick up Mathew and Melissa. Chet and Steve came by, and Steve drove me to an American Express office to buy travelers checks. The phone rang constantly as friends and relatives checked in to see how Jim

was doing. Doctors came out to report on Jim's condition.

Without any big questions for the day, I had an opportunity to reflect on Jim's attempted suicide. Sitting in the alcove with Chet, I said, "If anybody can recover from this and go back to a normal life, I think we can. Jim and I and Mathew and Melissa have lived our lives in such a way that I think people will support us rather than try to get back at us for past wrongs."

I went on, "I cannot use my energy worrying about what other people are going to think about Jim's suicide attempt. What they think is their problem, not mine."

Chet agreed with both statements. He had overheard my phone conversations with several people and knew I was being honest about what had happened. Taking his cue from this, when he went back to work, he kept everything out in the open.

During that time of reflection, Steve told me he felt somewhat like the people of Hiroshima. A recent book about the aftermath of the atomic bomb described how the people in one small fishing village had lived the same way for 3,000 years. Sons grew up to do just what their fathers did and daughters became like their mothers. After the bomb, life in the village was never the same. Forever after, events were dated as either before or after the bomb. Some things in Steve's life would now be dated either before or after February 22, 1989.

Sunday was spent coming and going from the hospital. The lung doctor came out to tell us that Jim's lungs were recovering, and he felt the prognosis was good. "The problem is," he continued, "we don't know if we have a brain-dead man."

I was stunned. From the beginning the indications were that Jim had good brain-wave activity. How was I going to handle this information with Mathew and Melissa watching so closely?

My response became what I call the Phyllis Marsh rule of survival in times of medical crisis. "The lung doctor said the lungs were recovering and that is good news. We should believe him on that," I said. "However, he is not a neurosurgeon, and he is not a specialist on the brain. Therefore, we will not take his word on what is going on in the brain," I reasoned. "We will listen to the expert only in his field."

It proved to be a good rule, for shortly the resident in neurosurgery came out. He said the CAT scan they had just done on Jim showed no major injury to the brain. Jim most likely suffered a concussion or a bruise that could still leave damage of an unknown quantity, but the neurosurgery specialist felt there was room for "cautious optimism."

One of the doctors said Jim had opened his eyes in response to his name.

As we sat there waiting for the doctors, Mathew first questioned whether the statistics fit Jim. In landing on his pelvis and right femur (the bone in the leg that curves and goes into the hip socket), Jim suffered a severe break, especially for a fifty-year-old man. "Mom, I think Dad will do O.K.," Mathew explained. "He has always drunk all that milk, and he has always done a lot of walking, so his bones should be in good shape."

I realized Mathew was right. Jim always ordered skim milk when given a choice. He believed in Vitamin C and for several years took some every morning. He did not sit around on weekends but spent his time working on cars or cutting firewood. All this helped bone density. Jim should be ahead of the curve for others his age.

On Sunday it was time to say goodbye to Chet and Steve. They would be going on to a meeting in Colorado (which Jim had been scheduled to attend) before going back to Washington. I shall always cherish the note I found tacked on the door to Jim's room. It said:

Phyllis -

*I stopped by to say good-bye. We take off at
12:30.*

*The nurse came out and said all is still stable
and that is good.*

*I am reminded of the line from
Rumpelstiltskin—'I weep, for in my very life,
I cannot spin gold from straw.'*

*It's now up to Jim—and, like always, he'll
come through.*

Have a nice day and we'll be talking to you.

*It has been an honor to be in such a family
over this week.*

My love to all.

Steve

SOMETIMES YOU HAVE TO LOOK STRAIGHT AHEAD

Each morning I gave myself a pep talk as I reentered Jim's world. "What will I find today?" haunted me as I rode up the hospital elevator.

When I spoke with Bruce Marsh, Jim's good friend who shares his last name and many like interests but who is not related, Bruce told me about his grandmother who lost her husband and son within two days during the 1918 flu epidemic. "Sometimes in life," she had said, "you have to turn around and look straight ahead."

"Sometimes you have to look straight ahead," I told myself as I approached Jim's door.

Cards and letters began arriving. The anticipation of finding them at Jim's bedside eased my re-entry, and the messages touched me deeply. One from a church friend read:

Dear Phyllis,

I wish I could be there to sit with you, hold your hand and help you think of happier times. Until that is possible I want you to know that your pain is our pain. Our lives have been different as we have waited for news every day.

We pray that you will sense strength anew each day and feel that God will provide for your needs.

You have approached a curve in life's roadway, and we pray that you will not feel alone as you try to make the turn. May all your friends help to make things easier as you and Jim travel through this difficult time.

Melissa bought Jim a balloon that said "You're special" and put it on his bulletin board along with the cards. On the way home from school the day Jim was injured, she had bought

two pieces of bubble gum, each with a prediction in the wrapper. The first one said, "You are going on an unexpected trip." The second one read, "There is no end to your good luck." We put them both up. Since the first one had come true so spectacularly, surely, we reasoned, the second one would too.

Jim's responses increased on Monday.

"Mr. Marsh, wiggle your toes," the nurse ordered.

Jim could not move his right leg because it was in traction, but his body would start to move and after a short interval his left foot would twitch.

"Mr. Marsh, squeeze my hand."

At first his right hand responded; the left remained still. Again, there was a hesitation before any movement, but the action followed the command so there was functioning in his brain.

Each nurse followed this routine and entered the results in Jim's record. Each change for the better was exciting; a change for the worse would be cause for alarm.

The nurses gave Jim morphine before they gave him a bath or moved him to his side because he became very agitated in response to the pain of being moved. A response to pain also indicated brain wave activity.

The chief trauma doctor explained there had been edema (or swelling) in Jim's brain and drugs had been administered to counter it.

Sometime on Monday I was given a note asking me to come to the business office to sign some papers. Reality was going to set in, and Sylvia and I contemplated the worst. It appeared Jim would live, but his response was slow. We knew that sometimes injuries are permanent.

Even if Jim recovered he would require extensive rehabilitation. Our concern, shared by many friends, was that our insurance might not cover his expenses because of the suicide question.

Sylvia and I had dealt with some of this before when my brother Duane was placed under what is called Title XIX to provide for his care in a state school. And we had researched insurance coverage of long-term nursing home care in 1986 when my father was in a wheelchair following a stroke and my mother fell and broke her hip. Luckily, my parents never needed such care.

As Sylvia and I talked, I again said I thought this would prove to be a medical problem and therefore my health insurance should cover it. If not, I would probably be able to cover the cost of the hospitalization and a stay in a rehabilitation hospital but this would take all our savings. If Jim remained in a coma and required IV feedings and round-the-clock care, I would have to seek assistance. I thought that in seeking such assistance, I would be allowed to keep our home and one car and half our savings.

"Somehow, someday," I promised myself as I faced the loss of a good part of our life savings, "I will manage to make life good again."

Employees of the federal government are allowed an unlimited accumulation of sick leave. Since beginning work in 1963, Jim had had only one major illness, hernia surgery in 1980, and in the course of twenty-six years he had accumulated almost a year of sick leave. With vacation time added, I knew his salary would continue for almost fourteen months—a good length of time in which to plan our future.

I waited until Tuesday and a chance to wear my red dress before going to the business office. As I signed the papers, the clerk asked one question, "Did he jump deliberately?"

"I don't know how to respond to your question," I replied.

"When I call to verify coverage," she said, "the insurance company may ask me that."

"Well," I answered, "deliberately implies Jim knew what he was doing. If his mind was not firing correctly, and I don't think it was because of a medical problem, then he could not have made a competent judgment in his actions."

I do not know if the insurance company asked the question. Jim's medical bills were covered.

On Tuesday morning Melissa left for Maryland. A car picked her up at the hospital to take her to the sidewalk check in of American Airlines at the airport. She would change planes in Dallas. Traveling so far did not daunt her, and I admired her for doing something at sixteen that would have scared me at twenty-five.

"Melissa," I counseled her, "you may find yourself angry at Dad for the position we are in." I was concerned that I would not be there to help her. "Please understand that such feelings are normal and talk it over with an adult."

A haircut had been on my calendar in Maryland for Thursday the 23rd. It was long overdue, and on Tuesday the 28th it became a today question. Sylvia booked an appointment for us at a shop on nearby Lake Avenue, a beautiful commercial area with specialty shops and a Bullock's Department Store.

Sylvia's hairstylist inquired how we had happened to come to Pasadena. Sylvia hesitated and the stylist persisted. When Sylvia quietly told her the events of the past week, the silence stretched for several minutes.

"You just tell that nice lady," she finally whispered to Sylvia, "to do whatever it takes to get that man well. Then after he's all well, she should just take him out and give him a good beating."

We had many laughs over the beating we were going to give Jim. We plotted a wet noodle party, a reunion in Washington of Sylvia, Chet, Steve, Jim and me and anyone else who wanted

to come to celebrate Jim's recovery by giving him several lashes with a wet noodle because of all he caused us.

Eventually, Jim opened his eyes when I spoke to him. As he slowly turned his head my way, his eyelids opened a quarter of the way. I continued talking and gradually he stared. His bulging eyes reminded me of the Cookie Monster on Sesame Street. There was no indication that he recognized who I was.

At some point one of the doctors told me he had had a patient who was in a coma for two weeks and still recovered. I found that very encouraging.

As midweek came, Jim continued to make progress. The blood pressure and heart monitor were turned off. He was fed a blue liquid through a tube down his throat with a machine monitoring the rate it was administered. The liquid's coloring was a precaution in case he started vomiting and they needed to identify what was coming up.

The nurse would tell Jim to squeeze her hand, and when he made a weak response, she would ask him to squeeze harder. His left hand began responding though it was still weaker than his right. He became agitated and pulled at the tubes, so his hands were tied.

Thursday morning Mathew and I visited Jim to tell him Mathew was leaving. Jim opened his eyes and looked at us, his best response yet. Jim could not talk because the breathing tube delivering oxygen to his lungs went through his voice box.

By Thursday, the trauma doctor was encouraged about Jim's overall health. He felt if we could rouse Jim more and the breathing tube could be taken out, Jim could be moved from ICU.

Thursday's question thus became how to arouse Jim from the coma. We discussed what might be happening in his body. One nurse suggested that Jim might be ducking the world because of what he had done; Sylvia and I agreed this was possible. We also noticed that whenever

we mentioned his friend Bruce Marsh, Jim's whole body reacted.

I have always believed everyone needs some control over his situation. There was very little Jim controlled, but if he were roused a little he could decide who was allowed in to see him. Taking these ideas into consideration, Sylvia and I began a good guy-bad guy routine. She was the bad guy.

"Jim, this is Sylvia." Sitting in the alcove outside the room, I heard her clearly. "You are in the hospital and you have been seriously injured. Now, Jim, you have to listen to me. I know you can't move, but you can open your eyes and let us know how you are. Bruce Marsh is coming on Friday to see you. If you don't want him to come, that is O.K., but you are going to have to wake up to tell us this or we are going to let him in. Can you hear me, Jim?" Jim would always respond in some way, either by turning his whole body as if to reach out or by turning his head and blinking his eyes.

After Sylvia finished, I would go in and speak in a softer voice. "Jim, this is Phyllis. You are in a hospital. You have fallen. You cannot move your right leg because it is broken and in traction. You cannot speak because there is a tube down your throat to deliver oxygen to your lungs. The doctors have explained everything that has happened, and they assure me it can all be fixed, including your feelings. I need you to help me make some decisions. The hospital only lets certain people in, and I want to know who you want to see. I have put Uncle Melvin and Carol on the list if that is O.K. Bruce Marsh is coming tomorrow, and I need to know if you want to see him."

We continued all day long, and each time the name Bruce Marsh caused the most reaction. We felt as the day went on that Jim was rousing.

Sylvia and I expected some complex cognitive functioning to be taking place, and no one at the hospital counseled otherwise. At the end of the day we were exhausted, and Sylvia

remarked, "Jim Marsh in a coma can still outsmart the two of us with all our faculties."

All during that week, and throughout my stay in California, I received many calls from Jim's colleagues. My journal, which I started early that week, notes a call on Friday from Francois in France. "Tell Jim," he said in slow English, "life is important, and this event does not change the love and respect we all feel toward him." Francois' son had stayed with us one summer, and so Francois remembered our son and daughter as he continued, "Tell Mathew and Melissa there is nothing wrong with their father's mind."

Steve called to say they had had a meeting at work and arbitrarily set October 1 as the date Jim might return. In dividing up Jim's work they were amazed at how many people were required to do it. "Please understand, Phyllis, everyone just wants Jim back. What happened, happened," Steve told me, "and the old Jim Marsh would forgive Jim Marsh for doing this."

On Friday the orthopedic surgeon said things were looking good for Jim, and surgery on his leg was scheduled for Thursday, March 9, the first date he could get the operating room. The surgeon spoke for the first time of Jim's broken right cheek bone. A plastic surgeon would be consulted on it.

Early Friday afternoon the lung specialist removed the breathing tube. Jim's oxygen level and blood pressure would be monitored, and if they remained stable, the tube could be left out.

"Say hi," the doctor commanded Jim just as I walked in.

Jim responded with a very breathy, very hoarse, very soft, "Hiiii." He could speak, and we had a new indication of brain function. Because a breathing tube suppresses the voice box, hoarseness is very common after it is taken out.

The oxygen monitor hooked up to Jim's toe caused it to glow like E.T.'s finger. The monitor electronically read the percentage of oxygen in the blood. We focused on it as Jim

breathed without the tube.

Bruce Marsh arrived around 1:30. Of course, Jim wanted to see him; we never had any doubt about that. Jim spoke a little with Bruce. The nurses were in and out checking the oxygen rate. Jim squeezed Bruce's hand often.

Bruce commented afterwards, "The old Jim is there. He's just very, very sick."

Jim tired quickly so we left to go to the cafeteria. When we returned, I asked him if he had had a nap and he said, "Yes." I thought that was an encouraging sign. At least he made the proper response. Later I learned he might have said yes to anything.

The oxygen rate remained stable. Extra oxygen was provided by a plastic tube under his nose held in place by an elastic band around his head. His E.T. toe glowed, and the feeding machine regulated the flow of food. Jim's body was almost on its own.

By Saturday morning, Jim asked the nurse when he could go home. His throat was very dry, partly because the ventilator had irritated it but also because drugs to reduce the swelling had dried his body out. He did not have the strength to sip through a straw so the nurse put ice chips in his mouth. He complained of hunger, and he tried to scratch his itchy skin. All this required processing in the brain.

On Saturday his nurse explained hospital policy in attempted suicides required that when the patient was moved to a regular room someone had to stay with him or her twenty-four hours a day. Huntington had a service through which we could hire sitters at \$4.25 per hour or we could provide family volunteers. Health insurance usually does not cover this expense. There was no way I could provide family volunteers, but I could at least take one shift. Thus from the time Jim was moved out of ICU his care would cost me \$68 a day out-of-pocket expense, and I would have to be at the hospital eight hours each day. If a psychiatrist determined the sitters were not needed, they could be stopped. Unfortunately, Jim's

confusion was such that he needed sitters the entire time we were in California as well as when we returned to Baltimore.

Saturday was a day of change. Sylvia needed to go home. I could not and did not expect her to stay with me for the long haul. Jim's brother David, who lives in Northern Arizona and had called several times to check on Jim, suggested his wife Linda could come for a week if I needed her. I quickly accepted. Arrangements were made for both David and Linda to fly to California on Saturday, and they arrived in the middle of the afternoon. Jim was alert and recognized them.

That evening I received a phone call from someone I had never met but who cared enough about my pain to share his own. He had attended the conference in Pasadena and knew of Jim's suicide attempt. He felt his experiences three years earlier might help me understand Jim.

"Everything was going well in my life," he stated. "I have a happy home life. We have strong religious beliefs. My job had been going well, and I had just returned from a sabbatical." Then, he explained, he started going into deep depressions. Things would be fine for a couple of weeks, and then the depression would return.

"When it returned, I would just get the feeling that all I wanted to do was end the feeling that came over me," he continued. His work suffered.

His family doctor put him on one type of medication but it did not work. Finally, he was referred to a psychiatrist, who listened to his story and assured him that he was not crazy. The psychiatrist stated he had a chemical imbalance triggered by the lack of stress. Up to the point of the sabbatical, he had thrived on an active, stress-filled life, and the sabbatical changed that. The psychiatrist indicated the resulting chemical imbalance led to a problem in the neurotransmitters in his brain and caused his feelings of depression.

The psychiatrist put him on medication about ten times stronger than his regular

physician had prescribed, and at the end of four weeks the moods lifted. After two or three months he went off the medication altogether and has been fine since.

He had spoken with some colleagues about this after Jim's injury. The other colleagues had a hard time understanding that neither religious beliefs, mental attitude, nor self-discipline could change this chemical imbalance.

I thought a lot about this conversation in the weeks to come as we sought the cause of Jim's behavior. It took a lot of courage for this man to make that phone call to me, a stranger.

Before David left for Arizona, he spent some time with Jim. Jim said he was sorry he had messed himself up. David offered to help in any way he could, but Jim responded that Mathew would help after he got home. This conversation led us to think Jim's mind was fine.

Sylvia left at 9:30 P.M. Sunday. We had seen airport shuttle vans around Pasadena and called one to pick her up. She tells me I would have survived without her that first week, but I know differently.

THIS HAS GOTTEN A BIT OUT OF HAND

Monday brought progress; we left ICU. I always reminded myself when a move occurred that it was progress toward Jim's getting well even though leaving the familiar for the unknown was scary.

When I arrived at ICU that morning, Jim seemed stronger. He was asking what time it was and where he was. He did not remember falling, so I explained the scenario again. After going through the broken bone in his hip, the surgery on his stomach, and the possible surgery on his cheek, he thought a moment, and without any emotion, said, "This has gotten a bit out of hand."

Again, I told him the doctors had explained everything, and it could all be fixed, including his feelings. He was gripping Linda's hand, and she felt him relax with my explanation.

Sitting in the cafeteria later, I started giggling. "A bit out of hand," I thought. "If he only knew."

Jim's lungs were still a concern. His lung doctor did not want to send him to a regular ward because he still needed respiratory therapy along with close monitoring. Thus, Jim was moved to what is called the Progressive Care Unit. Here one nurse was in charge of three patients.

Our lung doctor, concerned that Jim needed stimulation from the outside, insisted we have a room with large windows looking out at the palm trees on Pasadena Avenue.

The plastic surgeon came by to say Jim's right cheek bone was broken. Repair would require the placement of a wire in the bone, or the right side of Jim's face might look sunken. The procedure would be done immediately following Jim's hip surgery so only one anesthesia would be required.

Jim was talking more and told me the left side of his mouth felt funny as well as his right leg and hand.

In talking with the various social workers and doctors over the preceding days, I told each of them I thought Jim had a medical problem. Trained to suspect denial in any suicide attempt, they did not quite trust my judgment. They approached the idea of calling in a psychiatrist gently. In actuality, I would have felt the hospital staff had been negligent if they had not called in a psychiatrist, for he or she is trained to distinguish illnesses that have an organic, medical basis from those that have a psychological one.

Dr. Suzuki, the psychiatrist called in, arrived around 7:45 on Monday evening and asked if we could speak. We went to a visitors lounge in the unit, and I sat down and leaned my head back against the wall. I was too exhausted to do anything other than tell him everything.

I explained about Jim's tiredness, his loss of a sense of well-being, and his sleeplessness. Jim had told me that sometimes he felt like he was crawling out of a hole and just as he got to the top he fell back in. Particularly during the previous weekend Jim would get up tired in the morning after tossing and turning all night, and then things would improve in the afternoon.

The past few months had been particularly stressful for us. Contract negotiations at Jim's work had resulted in a change in contractor and the disruption of many of the researchers' lives. Jim shared his colleagues' pain and was glad things had smoothed out. Both of Jim's parents were dead, and their farm had been jointly owned by him

and his three siblings for four years. Events had made a final settlement necessary, and the negotiations among the four had been difficult. That had been settled, though, in December. Our son had gone through a difficult semester at the university he was attending and decided to come home to seek a job in the engineering field to help him know what kind of career he wanted. Though his decision had been painful for us, he had just settled into a job as an engineer's aide, and we were all pleased. Thus, it was surprising that Jim should attempt suicide when things were easing off.

I explained that Jim was a highly respected geophysicist. He had received a high award from the French Space Agency, one of few foreigners to ever receive it, because of joint research projects. "Many colleagues told me," I said, "if they made a list of people who might commit suicide, Jim Marsh would be at the bottom."

"Did your husband ever have any previous episodes of depression?" Dr. Suzuki asked.

"In 1976 he had a similar episode, but this recent one was worse," I said. "He complained of stomach pains and went to a local clinic. Because of the stomach pains, he was referred to a specialist on digestive problems."

I went on to explain that in 1976 I asked the stomach doctor to do the T3 and T4 tests of thyroid function. Following Jim's treatment for an overactive thyroid, the thyroid tests had always shown Jim to be in the high normal range. In 1976 the tests showed the function had dropped rapidly to low normal. I had discussed with the doctor whether the rapid drop from high normal to low normal could have caused the loss of Jim's sense of well-being, but the doctor dismissed my questions. Two years later the Washington Post reported that this doctor had been fired from the clinic because he had erred in diagnosing a serious problem, but by then Jim was feeling better. I had often wondered if I had been right.

Dr. Suzuki asked if any family members had ever been suicidal or on mood-elevating drugs. There was no one.

"It is obvious," he explained, "Jim's problem is not related to stress. His career shows he can handle stress." I knew that. "The symptoms you describe though are classic signs of depression. What I think happened," he continued, "can happen to anyone and can come on overnight. There seems to be a chemical imbalance in the neurotransmitters, and it is a medical problem that needs to be diagnosed and treated in the same way diabetes is a problem that needs to be monitored."

I had given a lot of thought to what Jim's colleague had told me about his own chemical imbalance. I told Dr. Suzuki I pictured it in terms of starting a car. A cold car often will not start until the gas is pumped, or if it is an older model the choke is pulled out, to get more gas in the carburetor. If the engine gets too much gas, it is flooded. The juice is coming from the battery as the starter is turning, but it never quite makes the connections to get going, and it just keeps firing.

I pictured stress requiring certain chemicals in the mind. With less stress, they are not used and flood the brain. The mind is firing but does not quite make the proper connections because of them.

The doctor smiled at me and said, "Actually, that is a very good analogy."

I would later joke to one of Jim's colleagues, "If this has been brought on by a lack of stress, then Jim in his own way has solved the problem."

The next morning I met the endocrinologist. He saw Jim's eyes for the first time, and their Cookie Monster quality surprised him. In my communications through the social workers and other doctors I spoke of Jim's overactive thyroid. When he went for treatment in 1969-70, we had not been married long and I did not go with him. I had not heard or remembered the term Graves' disease as part of

Jim's thyroid problem. Jim's bulging eyes enabled the doctor to recognize Jim had had Graves' disease. I had never given much thought to Jim's eyes because they reminded me of his grandmother's eyes. Then I remembered she had also had an overactive thyroid.

The endocrinologist showed me the numbers on Jim's thyroid. The first day the tests of thyroid function were all low, but in times of trauma a substance is released by the body to suppress the action of the thyroid, and so thyroid tests of most people in these circumstances would show low. However, when a thyroid is low, the pituitary gland releases a substance called thyroid stimulating hormone, TSH, to prod the thyroid to release more of its hormone. A high TSH level indicates a low thyroid. Jim's TSH level was a little high.

Jim's eyes, with the diagnosis of Graves' disease, bothered the endocrinologist and caused him to rethink some of the statements he had been planning to make. He was concerned enough that he wanted to do further thyroid tests before allowing the surgery on Thursday.

During the course of our conversation, he asked me, "What made you think your husband had a low thyroid?"

Again, I mentioned the tiredness, the sleeplessness, and the cold legs. "Those," he said, "don't necessarily add up to low thyroid. Usually people are cold all over."

Tuesday afternoon and evening were a period of soggy brain. Jim's brain fired as if its electricity had been flooded and shorted out during the swelling. While I was at dinner, he insisted Linda hand out papers in a meeting he thought he was attending. Not realizing he was sick in the hospital, he talked about orbits and perambulations and colleagues in Australia. Linda wrote down his words as she listened and pretended to respond to what he was saying. Nothing was coherent.

That evening I took a detour as I returned from the cafeteria. My tears had begun at dinner. I did not want to be comforted, and I did not

want to see anyone. Searching for refuge, I discovered the hospital's small chapel. The only light came through the stained glass windows on two side walls, and the chapel was empty. My whole body shook as the tears streamed down my face. My mind went blank as if my body had shut it off while my tightly coiled nerves unwound. Several minutes passed before I could regain my composure.

Upon returning, Linda looked at my swollen eyes and asked gently, "Do you feel better now?"

"Yes," I responded and sat down. After that, I needed a similar detour about once a week during our stay in Pasadena.

Steve called on Wednesday morning to say he had sought answers from his sister who is a clinical psychologist. She told him a suicide attempt like this is quite common. When it comes to a battle between chemistry and the mind, the mind depends upon the proper chemistry to function and chemistry often wins.

Wednesday marked the end of the second week since Jim had been injured. He was lethargic when I arrived that morning, but the sitter told me he had been asking for me. At first, I was not sure he knew who I was.

When everyone left, he talked but made little sense. The feeding tube had been removed, and a dietician had just been in to talk about his nutritional needs. He told me we were in Santa Fe and the diet center was in Northern Arizona. "We've been here before," he declared.

A little later he asked how we were going to solve the situation we were in. "I need to get back to work next week," he said.

"We need to get you well first," I cautioned. When he asked how we would get care back home, I told him Bruce Marsh would help us find a rehabilitation center.

"Bruce will know how to do that," he said. The conversation ended on a rational note.

The resident in neurosurgery came by to examine Jim. He felt shy about asking a geophysicist some basic questions. "Mr. Marsh,"

he said, "I don't mean any disrespect, but could you raise two fingers on your left hand for me?" When Jim did not respond, the resident pointed to the hand and said, "Raise two fingers, please." Jim did. The resident felt that given his condition neurologically, Jim could be moved back to Maryland shortly.

If we had moved him then, an airplane equipped with medical service would have been required. That seemed beyond my ability to handle.

Jim's Uncle Melvin and cousin Carol came in to see Jim on Wednesday afternoon. Jim stayed awake for several hours and made sense approximately seventy-five percent of the time. Uncle Melvin asked him, "Are the nurses good here or are they giving you hell?"

Jim replied, "They're giving me hell."

Jim asked about other cousins who lived in Ventura and friends of Uncle Melvin whom Jim had met. We were encouraged because Jim was initiating conversation.

On Thursday, I woke up saying to myself, "Don't sweat the small things," something I learned from Jim. Who would have thought orthopedic surgery would be a small thing. Jim was scheduled to go into surgery about 2:00 P.M., but it was 3:05 before they rolled his bed down to the second floor. I had explained to him that he was going to have surgery, but I had the feeling he did not realize what was happening.

Linda and I waited in the first floor reception room. At 5:05 the surgeon called down to say everything had gone fine. "Actually," he said, "it went better than I expected." Mathew had been right about his dad's bones!

The computer showed Jim was taken to recovery at 5:39 so the plastic surgeon finished his work in about 45 minutes. I never saw the plastic surgeon then or again.

It was a couple of hours before Jim came out of the recovery room. He had a tiny band aid at the corner of his eye as the only indication of the plastic surgery. Gone was the traction. A

tube coming out of the incision in the leg collected blood and fluid common after such surgery. He was restless and in a great deal of pain.

I called Mathew and asked him to call several people to say surgery was successful. Linda called her husband and asked him to call the family. And the calls continued to come in, from California, New York, Maryland, and West Virginia.

Linda and I happily turned Jim over to Frederick that evening. Frederick, the sitter who came each night to stay with Jim, first arrived on Wednesday, March 5, and he was there every night but two until Jim and I left the hospital seven weeks later. His normal shift would have started each evening at 11:00, but I found I was too tired to last an entire eight-hour shift, so I asked Frederick to come in at 10:00 P.M. He was always there, on time, calm and cheerful.

PIGS AND FAT BATS

Our routine was established. We spent the morning at the apartment making phone calls and taking care of business.

On Friday, the day after surgery, Jim's supervisor said he had placed Jim on sick leave, which meant Jim's checks would continue to be deposited in our account. That relieved one worry.

"Do you have Jim's travel papers?" he asked. "I was in touch with the police within an hour of this happening and they indicated they had them."

"I have them all," I said. To myself I thought, "They did not find me for two hours. Everyone knew what happened before I did. There was no way I could have covered it up."

He continued, "When Chet returned, he sat down with all the branch and explained what happened. He also indicated your attitude about being open about the whole event. It was very much appreciated, and I think you did a wise thing."

Steve called with words of encouragement. "The fun part of my job," he explained, "is talking with Jim Marsh and getting excited about our results." He and Chet were willing to bring work out to the house to help Jim make a gradual re-entry into work.

"Steve," I said, "Jim will be fully healed if he ever reaches the point where he can laugh about this."

Steve understood me very well. "Greek tragedy," he said, "is based on the ultimate human comedy that we are not in control. Once we realize we are not in control, then we are free to live."

My mother phoned to offer help. She and Dad wished they could come, but my father was in a wheelchair and the trip would have been too much. She offered to transfer money to my

account electronically so I would not run short. This was truly appreciated. Jim and I had lived frugally on his salary, but in planning for emergencies I had not considered we would be on the West Coast unable to get to the credit union. My parents' offer helped tide me over until I returned to Maryland and rearranged some accounts.

At the hospital Jim seemed calm and fairly rational. He wanted his mouth cleaned out.

When the orthopedic surgeon came in, I teased him. "Did you find good bones?"

"Yes," he laughed, "it was like drilling through a rock."

"I saved that little surprise for you!"

He indicated they would get Jim up that day, the first time he had been in an upright position since the injury.

Getting up meant sitting up and dangling his legs over the side of the bed. This was difficult, for several parts of Jim's body did not move. In surgery on the day of injury Jim's stomach muscles had been cut and then sown back together. He could not move his midsection.

His right leg, which had been in traction, was still very painful, and he did not move it. He was able to move his left leg even in ICU.

Because of his orthopedic injuries, there was a metal framework over his bed, and a chain with a triangle on the end hung down from it. Jim could use this to help pull himself up. At first Jim used his right hand to place his left hand on the triangle. Gradually he learned to walk his left hand up his right arm.

Moving Jim up in the bed required two people. Each would put an arm under Jim's shoulder, and on the count of three, if all went well, Jim would pull on the triangle and push

with his left leg at the same time they lifted him up.

When the physical therapist came to get him up, she had difficulty getting him awake enough to cooperate fully. Trying to make conversation with him, she asked where he was from. "South Wales," he replied.

The trauma doctor came by to say Jim would be moved to a regular room in a day or two and then to the rehab section of the hospital in about a week. "Your husband's affect seems flat," he commented.

I thought to myself, "Well, what does that mean?", but the doctor offered no more. It was true Jim had little animation in his face when he spoke. I assumed it was from being sick.

Jim's lungs continued to be monitored. He needed extra oxygen, and every four hours a respiratory therapist came to put medication in the oxygen to help open up his lungs. Jim was required to cough, which was difficult for him, and then the mucous was suctioned up. By the end of the week, he started coughing a little on his own, and at times, a very thick bloody mucous came up. Pneumonia was a big worry, and the nurses frequently had him change positions so the fluid in his lungs would get shifted around.

After being awake about five hours, Jim had just dozed off when the nurse came in at 10:00 P.M. She needed to ask several questions to see if Jim were oriented. Waking Jim up from a sound sleep and having him make sense have always been hard. I was sure she was going to fail.

She spoke very gently. "Mr. Marsh, my name is Frances. I am your nurse this evening, and I am going to be moving you and cleaning you up. First, I would like to turn you on your side so your lungs won't develop any problems. Can you give me your arm?" As she told him each step she was taking, from taking his temperature to checking his pulse, he gradually woke up.

"Mr. Marsh, can you tell me where you are from?"

"Upper Marlboro," he replied.

"What is your wife's name?" Her voice continued in a gentle, steady tone.

"Phyllis."

"How many kids do you have?"

"Two."

"Mr. Marsh, can you count to ten for me?"

His voice was weak but he spoke quickly. "One two three four five six seven eight nine ten."

Right on all counts! Who would have thought that hearing Jim Marsh, who has a master's degree in physics, count to ten would be cause for celebration? But I left feeling encouraged.

It was not always so. Asking questions of a patient coming out of a coma is an art. If Jim were asleep, and the nurse came in abruptly, shook him, and started asking questions, he rarely got them right. Thus, his medical record shows great discrepancies but I always felt the differences in techniques among the nurses accounted for much of it.

The calls continued to come in each morning. On Saturday one colleague called to tell me Jim was the only public servant who had ever treated him with respect. Jim helped him back when they both started out in satellite geodesy research. He told me the French community expressed to him how in the early days it was Jim's help that had forged the trust between the French and Americans. Several other younger scientists felt Jim had helped them when their careers were just starting and his generosity had made a difference.

Other calls came from friends. One called just to hear personally how things were going. "Every day when I come home," he said, "I call around to find out how Jim is."

A fund set up through our church to handle contributions from people wanting to

help received mail from Japan, Germany, and France as well as many places in the United States. Jim had rarely talked about his travels. He liked to leave his work at the work place and enjoy the community with his family. It was a surprise to the community to hear from such far-away places.

That morning I said goodbye to Linda, who had guided me through a difficult week. Jim's cousin Carol was coming to spend the night.

That afternoon, March 11, Jim got to brush his teeth, and he was moved to a regular hospital room. I learned over and over progress can be measured in many ways.

Shortly after Jim was moved, a leading scientist in Jim's field came in. I held my breath, for I had no idea what Jim would say.

Jim smiled at his visitor. "Charlie," he said as they shook hands, "building satellites is easier."

"Well said, Jim," I thought.

By Sunday, I was developing "hospital psychosis", and cousin Carol kidnapped me. She drove us to Glendale for a champagne brunch.

Upon our return Carol washed Jim's hair and discovered a wound on the back of his head. By this time, it looked infected, and Carol cleansed it with peroxide. About two inches wide and an inch high, it looked like a knife had sliced through it. Jim must have hit the back of his head as he fell. I asked the trauma doctor about it the next day, but he did not know the wound was there.

As I walked into his room once, Jim asked, "Have you heard from Pop recently?"

"No, I haven't," I responded. There was no reason to explain that his father had died in 1972.

On Sunday night my friend Marti arrived from Maryland. We had met through our church choir and been co-workers for over a year. She had driven me home from work after I received the call from the social worker notifying me of

Jim's injuries. When I told her I needed her, she did not hesitate about coming.

On Monday, Michel called from France. "Chet sends out telemail messages about Jim's progress," he told me, "but I just wanted to call to express our caring in a more personal way."

"I'm well taken care of, Michel." I tried to find a way to express to him all that was being done. "In American history when the pioneers going west met hostile forces, the pioneers circled their wagons for protection. I told Jim all of his friends had circled the wagons around us, and the wagons were all filled with love."

"I see," he said.

On Monday, I spoke with Dr. Suzuki, the psychiatrist. He had told Jim on Saturday that Jim had cut his wrist and jumped out the window of his motel room. Jim found it hard to believe he could have done such a thing. Dr. Suzuki questioned him again on Monday, but Jim could not remember anything about the cause of his injuries.

Jim's confusion seemed to have a lot of other people confused.

I told Dr. Suzuki my rule of survival—I was only going to listen to each expert in his field. Several people had again commented about Jim's low affect (or lack of expression in his face) as if this were something to be concerned about.

"Dr. Suzuki, you are the expert in emotions so when it comes to that I am going to listen to you."

"That's a good rule," he responded, "but Jim's emotions may be part of the neurology, and I will have to work with the neurologist to determine what is going on."

An admissions process is required before someone enters a rehabilitation facility. In order for insurance to cover rehabilitation, certain criteria have to be met. At least three hours of therapy a day must be needed. The patient must be making progress or it must be shown that therapy will result in increased function.

Jim obviously needed physical therapy. He could not move his midsection or his right leg. He could not turn over or get to an upright position on his own, let alone begin to walk.

He had obvious speech problems. Many times he did not make sense. Even when he did make sense, he used more complicated speech patterns than he normally would have used. For instance, he might have said, "Never enumerate your fowl before the end of the gestation period" instead of "Don't count your chickens before they hatch". Speech therapy would address this problem and others.

He could not dress himself. That was partly a physical problem, but it was also a cognitive problem although I did not realize it at the time. An occupational therapist would help him in this.

The evaluations needed for Jim to enter the rehabilitation program began on Monday.

I spoke with the social worker about all of the drugs Jim had been given since he entered the hospital. Jim never took medicine other than Tylenol for the headaches he had experienced over the past year. He also rarely drank alcohol. His body would have no tolerance for drugs. After the first surgery, he had been given strong antibiotics, valium to calm him down, morphine for pain, and diuretics to get rid of the swelling. Then the second surgery had come two weeks later with more anesthesia and more pain killer.

The social worker indicated that different people metabolize drugs at different rates. Someone who is very active, a jogger perhaps, might metabolize a drug in forty-eight hours, whereas an eighty-year-old might have it in his body for two weeks. It seemed to me Jim's body could have an overload of drugs if that were the case.

On Monday afternoon Jim took a nap and seemed very relaxed. His nurse awakened him with much difficulty to clean him up. By then the pain in his leg was extreme, and she gave him a shot of Demerol.

Within forty-five minutes Jim's affect had raised. He rattled the triangle above his head and rambled on about pigs and fat bats. I called the nurse and she turned the lights on. She asked Jim if he knew who I was, and he said, "No." She pointed at me, but his small red eyes stared at the triangle. When he focused on me, he wiggled his eyebrows like Groucho Marx and said, "That's my wife, Phyllis. That's my blonde wife, Phyllis."

When the nurse turned out the lights, Jim started in. He was concerned about paying \$15,000 for wire for a building under construction. Marti recognized the hallucination and talked him through it.

"Come on, let's get this show on the road, or it will be noon before we get started," Jim ordered. While rattling the triangle, he almost sat up. "We've got to get this vertical structure up. Now, Phyllis, get going there or we'll never get done."

I had heard that tone of command often. Thinking he wanted me to leave and that my absence would help, I walked outside to the hall.

"Now, where does she think she is going? We've got to get this building going. It's getting late, and it'll soon be dark here. What's keeping her?"

At one point he picked up his catheter tube and said, "Here's some wire we can use."

Marti responded quickly. "Jim, that wire has been used. Don't you think it would be better to get something new?"

"You're right," he said and tossed it aside before he had done any damage. "It's getting dark now. We better wind this up before too long."

Marti pointed out later that within the hallucination Jim's mind had followed a logical sequence. He had gone through two days work starting each morning and closing down each evening. Although his rattling around and restlessness exhausted him, in his agitation he showed more of his old personality.

Several things might have contributed to the hallucination. Since it started within a short time of the Demerol, the drug was the obvious culprit. I remember that following Jim's hernia surgery in 1980, he had been in "la la land" following a shot of Demerol for pain.

Jim's mind was very stimulated that day because of all the testing for admission to the rehab unit. Dr. Suzuki had also started Jim on a very low dosage of Tofranil, an anti-depressant.

On Tuesday afternoon around 3:00 the physical therapist came again. Following that, Jim was in a great deal of pain and got a shot of Demerol. Off he went to sleep, only to be awakened by the speech therapist. But he was in "la la land" again and could not respond to the questions.

When the therapist left, he started giving me orders to do something about "the bear at the end of bed." I could not figure out what he wanted me to do. He then began a monologue that ranged far and wide, as if the memory portion of his brain were the wheel of fortune spinning round and round, touching at one place only to spin again and stop at another totally unconnected place. He talked of getting in touch with his grade school principal. His cousin Kenny in West Virginia was spoken of in the same sentence as the company that had won the contract in his office. On and on his monologue went, from money to Uncle Melvin, from Australia to church.

His nurse for the evening heard me express my concern about the medication. In checking his records, she told me that in place of the Demerol, he could have an equal amount of Tylenol with codeine in tablet form if it were given every three hours. "You have the right to refuse the Demerol if you choose," she advised. I chose to do so. The consequences of Demerol outweighed its advantages.

At 1:30 P.M. on Wednesday, March 15, three weeks after his injury, Jim was dismissed from the hospital and admitted to the rehab unit.

THE SET O' THE SAILS

*One ship sails east
another west
With the self same winds
that blow.*

*'Tis the set o' the sails
and not the gales
Which determines
the way they go.*

This bit of wisdom comes from a cross stitch sampler I worked before I had children. It hangs in the bathroom Mathew and Melissa use so they may read it every day if they so choose. Its simple message speaks a profound truth.

My prairie ancestors, who were farming in Iowa before the Civil War, never commanded ships at sea, so they did not pass on to me any knowledge of actually setting sails. However, they faced tornadoes and blizzards as they went about establishing a home in the new world.

My ancestors survived, and their descendants thrive, because they knew a satisfactory life depended upon "the set o' the sails" inside them more than the winds of change on the outside.

Sometime in my mid-twenties I discussed with my sister-in-law Margaret, widow of my brother Keith, the idea of being a survivor. Some people suffer great tragedies and losses and still retain a sense of self and a caring attitude toward others, while other people are embittered and defeated by a minor loss. We questioned whether we were survivors or defeatists and pronounced ourselves survivors.

That pronouncement haunted me in the early days of Jim's illness. How does a survivor

sail through pain, tiredness, anger, and loneliness?

Religion and prayer were never topics for discussion when I met with Jim's colleagues in the scientific community. As satellite geodesists, they focused on what can be measured rather than the why of the universe or the unknown forces of faith. As the days passed and I received letters from Jim's colleagues, I began sensing that in the face of such an inexplicable happening as Jim's illness even the scientists were searching.

Early on I received a letter from a colleague in the academic community that said: "The terrible ordeal that you and Jim and your family are going through is impossible to comprehend. However, it is encouraging that Jim continues to improve. I know that I am just one of Jim's many friends who are thinking of you both and praying for Jim's complete recovery."

That short statement touched me deeply, first because it was honestly meant, and secondly, because it said it all. The situation was beyond comprehension, he was thinking of us, and the only thing to be done was to search for meaning and help outside ourselves. He did not define what he meant by praying.

Tiredness overwhelmed me in the first weeks of Jim's illness—tiredness that left me unable to think of anything more than what had to be done that hour. I was too tired to pray in whatever form that might be. I felt that an all-knowing God would understand that I was too tired to pray. After all, I had not complained!

In quiet moments, though, my mind searched for a deeper understanding, one that might elude the scientific or realistic mindset. I thought often of the people who were praying

for us. In one of those quiet moments I remembered a conversation I had many years ago with a devout lady who belonged to the Methodist Church we attended. She was sharing some things a person could do for someone who was seriously ill. "You could lend that person your faith," she stated. It had seemed an odd idea to me, and I had pondered over it for years.

I re-examined it several times in those early days in Pasadena. I lacked the energy to focus on subjects as deep as faith, meaning, prayer, ultimate reality, purpose. So I decided to borrow someone's faith.

I chose (yes, chose) to borrow the faith of an optimist.

This optimist was a co-worker of mine, Walter. The previous September I attended the ceremony during which he was ordained a deacon in the Catholic Church. His sense of humor enlivened the office, and his constant, quiet statements of faith interspersed with his laughter were genuine. He knew God was compassionate. I knew Walter would be praying and an all-caring God would understand I did not have the energy to create my own. I would just second what Walter was praying. By choosing Walter's faith, I was choosing to believe that life could still be good.

As the weeks went on, we received many letters stating "our church held you up in prayer." The prayers came from California, Maryland, Poland, France, and all places in between. These expressions of caring touched me deeply.

Moving to rehab meant moving to a different part of the hospital. The facility had thirty-two patients; some were stroke patients, some had severe injuries from car accidents, and some were elderly women having knee surgery.

Check-in went well. A nurse asked Jim questions about his belongings and his injuries. He answered correctly except that he told her he was in western Maryland.

After Jim was settled, Marti and I decided to follow up on prodding from my sister-

in-law Sylvia that we do a Medline search in the library at the hospital on the medical problem Dr. Suzuki had described. I was not up to concentrating on the project, but Marti volunteered to help.

We first asked the social worker the terminology we would need. In checking the medical records, she said Dr. Suzuki had labeled Jim's illness a "major depressive episode with psychotic features." She told us to start with that and also the term *neurotransmitters*.

Medline is a computer program that searches through the medical literature and prints out a list of articles in various journals on a topic. We discovered that the library at Huntington did not have the Medline program. Marti was told the Pasadena Public Library had Medline, but unfortunately, Medline had been down for several days because of a water main break at the National Institutes of Health in Bethesda, Maryland, where the computer is located.

The librarian directed Marti to a guide to medical journals similar to the Reader's Guide to Periodical Literature. She found several listings of articles linking neurotransmitters with depression and psychotic illnesses; however, she did not get a chance to pull any of the articles.

Dr. Suzuki inquired about my research when he next saw me. "Doctor," I leaned my head against the wall in the hall as we were talking, "I am a fairly well-informed person. I read a lot of articles in the papers and magazines about medical problems. If what has happened to Jim is so common, why haven't I read about it?"

"Because," he responded, "when it happens, people go home and don't talk about it."

"Well, then," I told him, "our ability to overcome this is going to depend on educating people about it."

He agreed. "Remember, you have nothing to be ashamed of. Jim had a biochemical imbalance. It is best to talk about it."

The first few days at rehab were unbearable.

Jim was required to dress each day and sit in a wheelchair as long as possible. Marti and I shopped for sweat clothes for him to wear as the soft fabric would be as comfortable as anything on his leg.

Physical therapy began with range of motion exercises. Lying immobile had weakened Jim's muscles, and a series of exercises done in bed moved each of the major muscle groups.

To get Jim up, the nurses used a lift. A canvas pad was placed under him. Hooks on the end of a chain were attached to the four corners of the pad. A hoist then lifted him up and placed him in a wheelchair.

Jim was feisty. When I walked in one day, the nurses wanted to speak to me about what was happening. "Aren't you forgetting something?" Jim yelled.

The nurses said, "What?"

"Me."

He was uncooperative during therapy sessions. One aide beckoned me aside to urge me to calm him down. "They send patients home if they are uncooperative," she warned.

Marti stayed in the room while a speech therapist worked with Jim. He could repeat the sounds the therapist asked him to, but he could not remember longer sentences to repeat back. The therapist gave him three words, and then said she was going to go on to something else but would ask him later what the words were. He remembered the first word, but then gave longer, more complicated words for the other two.

In response to questions, he said he was born in Orange County, California, and had gone to a Greek-American junior high school and a French-American high school. The therapist did not know if these answers were correct. Jim was born in Ventura, California, but his parents moved to West Virginia when he was three. He grew up on a farm and attended the local public schools.

Letters and cards arrived each day. One I received during the early days in rehab read:

March 6, 1989

Dear Jim,

How delighted I am that you are reading this letter! We all look forward to your return to Washington, so we can express our happiness at your recovery in person.

There is one thing I want you to know above all. That is, your legion of friends and colleagues support you to the hilt. In your career you have set THE standard for generosity, fairness, kindness, and responsibility. It is our time now to return the favor. In my own case, without your support and understanding back at the beginning, my career would be far less than it is today. And it was also your example of many years ago when we worked closely together that made me realize how important it is to cooperate and be generous with colleagues....

What I am trying to say here is that you are very highly regarded and held in deep affection by myself and many, many others, and your recent tragic event has not changed any of that. When you get back to Washington, we look forward to seeing you, helping you and your family in any way we can, and working professionally with you in whatever capacity you choose.

So get off your butt and come home!

The truth is when I received this letter Jim was incapable of reading it. Either I was measuring progress in inches that were being taken to mean miles or I was guilty of a cover-up of the seriousness of Jim's injuries. Perhaps all of us were naive when it came to understanding comas.

That letter was meant to encourage Jim in his recovery, and it also came at a time when I needed to be reminded in every way possible

that the person in that hospital bed speaking in strange ways was really a caring, thoughtful human being. At a time when Jim could not speak to me himself to tell me this battle was worth it, his friends spoke to me for him.

Usually I read the cards to Jim, but one day I decided, for my peace of mind, to see if he could read. There were three cards that day, one from relatives named Hilda and Oscar in West Virginia, one from a colleague named Clyde Goad in Ohio, and one from a high school friend named Ed Schupbach. These were not names that could be made up. I opened each card, handed it to Jim, and asked who had sent it. He named them all, and I relaxed a bit.

Two days after Jim went to rehab, the physical therapist had him standing between the parallel bars. The doctor did not want him to bear full weight on his broken bone, so his arms supported him.

By this time, though, Jim was not eating. He could barely swallow. Talking hurt, and his method of communication became a thumbs up signal for yes, thumbs down for no, and a shake of the hand if he did not know.

Since Jim was still on oxygen, the lung doctor came by and checked Jim's throat. He had developed a common infection that occurs when too many antibiotics kill off certain good germs that protect the body from this infection. Medication was prescribed.

Dr. Suzuki spoke with me about Jim's confusion. To me, he was far better the night before the surgery than he had been any time since. Dr. Suzuki told me no concussion had shown up on the CAT scan so that was not the problem. He indicated Jim's confusion might clear up, but at that point no one could say.

He also told me he had taken Jim off the anti-depressant. Because of Jim's hallucinations and confusion, he did not feel Jim needed any drugs to make his mind more active.

By the weekend Jim was a wild man. It was necessary to get him up more each day in order to strengthen him, but he did not feel good.

With his throat too sore for swallowing, he had eaten very little for several days, and I am sure his blood sugar was out of balance.

Sitting in his wheelchair, he looked like a man whose head had been cut off and placed in his hands. Something was wrong, probably neurologically, so his head seemed to hang down on a floppy chain. He could easily raise it when prompted, but it soon slipped back down.

The nurses kept him up a little longer each day, but he cussed them when he wanted to go to bed.

On Saturday morning, my friend Marti left on the airport shuttle to go back to Maryland. I told her later she had helped me survive the roughest week.

Jim's brother David and his family arrived on Saturday afternoon. Jim recognized them but was too uncomfortable to enjoy the visit. He pounded his head and said it hurt. He rattled the triangle and generally was very restless.

The visitors left for dinner, and I finally got Jim to down some ice cream and a little water before taking a nap. This was his first food in a couple of days and had a calming effect on him.

When his brother came back, Jim started giving him orders about adjusting the bar over his bed. "Move that," Jim said.

David would point to one side of the bar. "Is this what you mean? It seems to be O.K. to me."

"No," Jim would say. "Move it. You know get it out of there."

David kept trying to find out what Jim wanted adjusted, but nothing seemed to work. After about ten minutes, Jim finally managed to communicate that he wanted the framework out of the way so he could get out of bed. We tried to explain why he could not.

That evening, my sister-in-law Margaret arrived from St. Paul. She is the widow of my brother Keith. Margaret is the only one of my five sisters-in-law I knew before my brothers started dating them. Her hometown is

thirty miles from mine, but we both played the French horn in high school and we met at band festivals.

Sunday morning Margaret and I spent a leisurely time enjoying the California sunshine on our patio. I rented a car the entire time I was in Pasadena, but I preferred having someone else drive so we stopped by the rental agency and I added Margaret as the driver.

Her introduction to the headless Jim Marsh was brutal. We arrived at the hospital around 12:30. His nurse for the day wanted to keep him up until 1:00. When we walked in, he yelled at me. "There's Phyllis. Phyllis, I want you to get me back to bed. They won't listen to me." His eyes bulged out of a gaunt face.

I tried to get him to stay up long enough to eat. Because of his throat problem, he was still on soft food. The generic brown meat and green vegetables were not appetizing. Sitting outside on the patio, he took a bite and tapped a rhythm on his bowl with his spoon. He ate a little ice cream and sipped some water so his throat seemed to be clearing up gradually. At 12:45 his nurse gave in and put him to bed.

The afternoon was spent with my rubbing his head or washing his hair with a special shampoo that is poured on, rubbed in, and then dried. It is an unsatisfactory way of washing hair, and after three and a half weeks without a good shampoo Jim's scalp itched. Afterwards, I combed his hair. I felt any kind of stimulation would be good, and that touching his head would stimulate the nerves there.

His speech pattern remained disturbed. "Use more static," he ordered while I combed his hair. It was a while before I figured out he meant to scratch harder.

The word "bear" became a catchall for any noun. "Give me one of those bears" might mean to hand him a Kleenex.

"Margaret, would you adjust those bears down there" meant he wanted the heel protector readjusted.

As we sat there, he kept asking for water to rinse his mouth out, and if I reminded him, he would swallow a bit.

He ate a ripe banana I bought in the cafeteria. After he devoured some custard, the nurse ordered ice cream. After he ate nearly all of this and drank some water, I was beginning to feel the crisis was ending.

Margaret's introduction had been difficult, but the day ended on an upbeat note. Jim looked up and said, "Why there's a clock and it is quarter to eight." And it was.

By Monday it was obvious Jim had seriously disturbed sleep patterns. Each evening, we told Frederick, his sitter, that Jim had been awake a long time and should sleep through the night, but he never seemed to sleep longer than three hours. Frederick would spend the night trying to calm Jim down.

Jim had gone through four hours of therapy on Monday morning and was again getting feisty. The nurses continued to ask him questions to see if he knew who and where he was. Finally, he turned to his sitter for that morning and said, "O.K. You tell me. What is my name? Where am I from? How many children do I have?"

When I arrived on Monday, he was slouched in his wheelchair. As I pushed him around, he said, "Phyllis, I feel just awful." It was the same expression and tone of voice he had used prior to coming to Pasadena and back in 1976 when I thought his thyroid had gone low.

"Jim, I know you feel awful." I tried to soothe him. "The doctor seems to think your feelings are caused by a chemical imbalance, and we will have to find the medication to change them."

After some pain medication and a short nap—not nearly long enough for someone who had had only three hours of sleep the night before—he became agitated. He played with the TV button, continually changing channels. His speech became very mixed up, and he

constantly made a circle with his index finger. It had been a stimulating day, including a visit by his brother David.

The nurse gave him a sleeping pill, hoping it would help him sleep through the night. It had no effect. He started yelling in the night, and the nurses had to tie him down to keep him in bed. He did not cooperate during his therapy sessions the next morning.

I worried that Jim could not continue with therapy if he was unable to sleep. While he dozed off and on all day, he could not stay asleep, the same sleep pattern he exhibited before coming to Pasadena.

I called Dr. Suzuki to express my concern. He replied that the rehab doctor could order a sleeping pill for Jim. There were still severe cognitive problems, and he did not want to start any anti-depressants until the extent of the problems was discovered. A psychologist was testing Jim regularly to determine what the problems were.

Then, almost as an afterthought, he said, "The endocrinologist decided your husband is slightly hypothyroid and is starting him on Synthroid. That should make him feel better."

"Indeed," I thought, "perhaps this housewife knew what she was talking about."

That afternoon Jim pointed to his left leg and said something about a warm water wash. Upon examination, I discovered the urine bag had leaked out and the bedclothes were wet. "That's getting closer," I thought.

On Wednesday, four weeks from injury, I received a call from Jim's supervisor. He asked me if I thought Jim would eventually return to work. I responded, "Nothing indicates that he cannot fully recover, but nobody knows for sure."

I never found a better way to answer that big question. I always asked the doctors if they knew anything that would limit Jim's recovery. No doctor told me Jim could not get well, but no doctor guaranteed things would be fine either. Thus, I talked with friends about the gray period we had to go through.

I did not go into great detail about Jim's confusion, not because I was denying it, but because I felt Jim had a certain right to privacy.

Progress that day was marked by Jim's using the urinal after the catheter was taken out. His brain recognized a problem and directed his body to solve it.

Margaret and I set keeping Jim awake from supper time until 10:00 P.M. as our goal for that evening. Then maybe he could sleep all night. It took some planning. We armed ourselves with a Sony Walkman, nail clippers, and Vitamin E oil.

He was king for the evening. His stitches had come out that afternoon, and his nurse wheeled him in to take a shower for the first time in four weeks. He grumbled when he could not stay longer. We trimmed his nails, we combed his hair, we played his favorite music, we rubbed oil onto his dry skin, we reminisced, and at 9:00 P.M. he fell asleep.

Two days after Jim started on thyroid medication, he had a good night's sleep. The next day he completed all his therapies. His physical therapist had encouraged him to take some steps hanging on to the parallel bars, but he had been unable to. The fourth day after starting on Synthroid, he not only took a step but walked the length of the bars. Everyone watching gave him a thumbs up sign for encouragement. His nurse gave him two Tylenol #3 (which has codeine in it) and he fell asleep for two hours.

He stopped twirling his finger. His speech improved, although when he wanted his pillow fixed, he said, "Would you please do something with this footprint?" and he asked where his "clothes" were, meaning his blankets. He did not complain of feeling cold, and there were fewer bears.

WHEN ANGER BECOMES A TODAY QUESTION

Every Wednesday the therapists, nurses, and doctor in the rehab unit reviewed each patient's progress and set goals. A social worker assigned to the case attended and reported back to the family and patient. After the first meeting about Jim, I did not get a chance to talk with Maria, our social worker, until Thursday afternoon.

Each time I approached Maria or any other professional who was working with Jim I yearned to hear everything was going to be fine in the long run. As professionals, they could not assure that and could only tell me how far Jim had progressed. Understanding there would never be a way to overcome that difference between hope and reality because they only become one at the end of the long recovery process, if at all, did not quell my yearning.

"All the therapists and nurses noted an improvement in Jim when he was put on thyroid medication," Maria began.

She spoke of head trauma, a new term for me. She said Jim's cognitive abilities were mildly to moderately impaired. His judgment of safety was very impaired, and he could not be left alone because he might try to get out of bed and could break his leg if he did. In IQ testing by the psychologist, Jim's IQ tested at 70. In fourteen questions of common knowledge, such as "Where is London?," Jim could answer only six. His speech patterns were disturbed, and when asked a question he could not answer, he resorted to confabulation, or using language from his work situation that had no meaning in the context of the moment.

The team felt Jim would be strong enough to fly to Maryland by commercial airliner in three to four weeks. He would have to transfer to an acute rehab facility for another two to three months of therapy and then might

go to a convalescent home. Perhaps, following that process, he could go back to using computers or be trained in a new field. It was too early to predict the longterm prognosis.

Afterwards Dr. Suzuki came by, and I asked him about head trauma. He explained that when the head is hit, the brain, which is encased in fluid, bounces around. That caused the edema or swelling Jim had. Nothing specific may show up on a CAT scan when this happens, but it can cause serious damage. A month is a short time in the recovery process for head trauma.

From several sources, I had learned the brain heals well for at least a year. After that it continues to heal but at a slower rate. This recovery was going to take a long time.

To be told my husband had an IQ of 70 felt a little like coasting down a two-mile hill on a bicycle and being swept off the seat by an unexpected branch. It stopped me short, it took my breath away, and it unleashed anger so powerful I wanted to destroy the thing that did it.

I had experienced every emotion since getting that call; I had cried, I had laughed, I had cared, I had mothered, I had reached out for help, I had been supported. Equally important, anger had nibbled away at me. At times it surfaced only to be denied. Too many other questions came before it.

That day I could no longer suppress my anger. My husband evoked images of my mentally retarded brother, and no one could tell me Jim would be O.K. down the road. If I was going to spend the rest of my life introducing this man as my husband, I needed to know how I was going to handle my emotions.

First, I had to acknowledge the anger I had begun to feel long before February 22, 1989, and which I had been trying to resolve.

Once upon a time I had a really good marriage. Several years ago I read in *Ann Landers* or *Dear Abby* that if all marriages were rated, five out of twenty would be truly good and harmonious, five would be intolerable, and the other ten would be so-so, an equal mixture of good and bad. I had rated my marriage in the truly good category and felt blessed.

Jim and I were married in 1966, and up until 1982, we relied closely on each other for emotional support. At some time during each day, it was necessary to each of us to sit down and share emotionally the events of the day. That had changed in recent years, and the change began in 1982, the summer we brought Jim's mother home from the rehabilitation facility she had been in because of disabilities caused by a brain tumor.

My mother-in-law appreciated my care. She was not the reason for the disturbance. But the burden we shouldered, taking care of someone with a life-threatening disease and seeing that the family farm was maintained, cut into the time Jim and I had together. I always blamed myself for not insisting Jim and I do more together during that time.

After that summer Jim's mother spent eleven months in California with her sister before we brought her back to Maryland to a nursing home for the last five months of her life. Jim and Mathew continued to drive three hundred miles to West Virginia to maintain her property. In the meantime, Jim traveled more that year than any other. We were apart at least one-fourth of the time. Many times when his mother was in the nursing home, I was the only one she had to visit her.

It seemed after that Jim's energy went into his job, into going to West Virginia to take care of the farm, and into working on old cars with our son. In 1988 Jim went to Paris in May, Helsinki in July, Florida in September, and the Netherlands in December. When he came home, he preferred to listen to the radio and fall asleep on the sofa on Saturday nights rather than go out.

I spent many hours alone. Jim objected when I wanted to volunteer my time somewhere. When I talked about my loneliness, he told me I was lucky I did not have to go out each day to work.

When I first mentioned getting a job, Jim suggested we would be further ahead if, instead of going to work, I took over the management of our savings and investments. I took his suggestion seriously and spent many hours in the library researching financial planning. He supported all the changes I recommended. However, in no way did our resources match those of the Rockefellers of this world, and managing them did not give me the challenge of a full-time job.

In order to keep my mind active, I solved many *New York Times* crossword puzzles. I played complicated games of solitaire. I read ten books a month and crocheted many afghans. Jim seemed to think I preferred these pastimes; I knew I did them to accommodate him so he was free to travel and take care of his family farm. I reached the point where I felt I would scream if I had to spend another day this way. I was angry I was not supposed to want or need what Jim had.

I finally decided I could not continue, and I was going to do for myself what I had done for everyone else; I was going to encourage myself to be all I could be.

I found a part-time job as a proofreader. Though it was an excellent reentry job while Mathew and Melissa were still home, there was no room for advancement.

With our children reaching college age, I wanted to use my education in a career job. Each Sunday I studied the *Washington Post* employment section looking for something that enticed me. I had sent my resume asking to be considered for an administrative assistant's job.

In September 1988 I began a course of study at our local community college that could have led to my becoming a CPA. The program excited me because it was tailored for people

who already had bachelor's degrees. I could take all the necessary courses at this college so near my home. My first course was a cinch and piqued my interest in following through. While I was flying to Pasadena, I should have been in my accounting class getting back my first exam of the new semester.

Excited about making a contribution to the world and tired of being lonely, I felt my future beckoning.

Now I was faced with a husband who could not be left alone. His recovery would take several months in a hospital and then follow-up therapy as an outpatient. Someone would have to be available to drive him.

No one I knew witnessed the battle between my anger and my soul. Margaret and I went separately to the cafeteria each night so the other could stay with Jim. There, after my talk with Maria, with no one to distract me and no other problem to confront me, I had to acknowledge and release my rage.

"I have taken care of everyone else. It is my turn to experience the world," one half of me said.

"Yes, you're right," the other half responded.

"Jim Marsh was not concerned about me when I had to stay home while he went everywhere. He told me I was lucky I didn't have to go out into the world. Why should I be concerned about him?" My body was on automatic pilot as it shoveled in the food.

"You're right, Phyllis," I answered myself. "He wasn't concerned about your loneliness when he was on top of the world. He thought being lonely was stupid."

"Well, then why should I worry about being with him?" My anger was like a relentless prosecutor persuading a jury to pronounce Jim guilty.

"Phyllis, you have every right to feel angry," I soothed myself. "The job, the farm, the old cars, and everything else came first." That was the first step in resolution. I accepted

the anger. The prosecutor was looking out for my interests. "But look behind you, Phyllis. If you walk out, who is going to take your place?"

"Well, there is no one in Jim's family who can take over to see that he gets to the doctor. I guess the responsibility would fall on Mathew and Melissa—he is their father." Even in anger I could be honest.

"Can you do this to your kids?" My conscience was looking out for me also. "What would they think of their mother if she walked out on their father when he was down?"

The prosecutor had no answer for that one.

"No." Somewhere within me I resolved this. "I can't. I can't walk out on somebody who is down. I can't walk out on my kids. There is no one but me who can do this. Besides, I once had a truly good marriage, and someday I would like to have a chance to find it again." Luckily I had not choked on the food.

"But how am I going to survive if I have to spend another summer doing crossword puzzles and playing solitaire? If I have to do that driving, I am not going to be able to have a job. I don't think I can do that again." Something inside of me demanded totally honesty. "Jim Marsh shot all my goodwill on spending time alone on himself, his family farm, his old cars, and everything else."

"That is a difficult question." A long time ago I had learned we have to accept that sometimes life can be unfair.

"What if Jim Marsh never gets better?" I demanded to know. "What if I am faced with a lifetime of taking care of him and never being able to leave him alone? I don't want to be a lonely, bitter old woman. I will probably eat myself to death and then where will Jim be?"

Somewhere deep inside me a rational voice came back. "Phyllis, calm down. You won't know for at least a year whether Jim will get better. You won't know whether you have lost anything until then, and maybe not even then."

“I don’t want people to say, ‘There goes Phyllis Marsh whose husband jumped out of a window and ended up brain damaged.’ I want to be known as someone who used her mind to make the world a better place in some way.” That prosecutor could be brutal. “I worked hard to get this education; why waste it baby sitting for someone?”

“O.K., Phyllis. It’s time for some plain talk.” Perhaps I was hearing my mother’s voice inside my head. “You may have to face all that you are worried about, but you are not going to know for at least a year.”

That was true. “At the end of the year,” the voice continued, “you will have to take stock of what you have lost, whatever that is going to be. Then you will have to grieve—grieve as hard and as honestly as possible for all you have lost, whatever that is. If Jim requires constant care, then you will have to arrange for that. If that means adult day care programs, that’s what it means.” Indeed!

“You are going to have to work crossword puzzles and play solitaire and spend a lot of time alone this summer because there is no one but you to see that Jim gets the care he needs. Yes, you will have to postpone your career, but not forever—just for a year or so.” I could feel the anger receding.

“But what if Jim Marsh does not do the therapy program? He’s never liked having others manage his life. He thinks therapists are stupid.” My prosecutor/friend still cared.

My soul responded. “If Jim Marsh does not do his therapy, that will define and limit Jim Marsh, but it does not have to define and limit Phyllis Marsh. Only Phyllis Marsh, by the choices she makes, can do that.”

“But what about this bitterness?” I asked myself. “I don’t want to pass on to Mathew and Melissa that life is so bitter. I want them to know that life can be good.”

The answer came from somewhere within. “Phyllis,” I promised myself, “at the end

of the year you can grieve for whatever you have lost. And at the end of that process, there can be joy and beauty in your life if you choose to recognize them. Remember, only you can define what your life is going to be.”

By then I was finishing my frozen banana yogurt.

Looking back, I realize the understanding I reached during that mealtime made survival possible. In a situation in which I had little control, I took control of the only thing I could—my attitude. When the going got rough, I reminded myself my bargain depended only upon me.

When Jim refused at times to do his therapy, he could not manipulate me. I reminded myself it would be Jim Marsh whose life was limited if he did not cooperate. Consequently, I take no credit for the hard work which Jim eventually did in order to recover. He did it for himself.

I knew enough about myself to know I would spend that year seeking the most up-to-date knowledge about Jim’s illness and injuries. I was not walking out on Jim Marsh.

I did not walk out on Phyllis Marsh either.

EVERYTHING I DID NOT KNOW ABOUT THYROID

That Friday we met Virginia DeJesus, our new daytime sitter, who soon had Jim figured out. She pushed him all around the hospital for entertainment and encouraged him to do his exercises. The first day he fired her twice, but then thanked her for her help when she left. She said Jim had gotten all but one of the speech therapist's questions right.

That day Jim turned himself on to his side. It required effort to reach over, pull on the bars and bend his right leg. Progress visited us again.

As we left that evening, though, he asked me to take his socks off. "They're too tight around the interstate," he said.

I missed my children. Melissa's spring vacation provided an opportunity for her to visit. On Easter Sunday she flew into Burbank, and Margaret and I braved the freeways to meet her.

When Melissa walked into his room, Margaret saw Jim smile for the first time. "Melissa, don't spend all your time here," he said. "Old Dad is not going to be in here forever, and you should get out and see some of California."

That afternoon when he was in pain, he wanted a pain pill but in asking for it said, "Give me cold pain water." Later, after a rest, he talked on the phone with his brother and was able to tell him about Melissa's arrival and how Mathew was planning to fly out and go home with us.

That Easter Sunday, at Dr. Suzuki's suggestion I began speaking with Jim about what had brought us to this place. First, I told him of the many calls and cards we had received. His eyes filled with tears as I went through the many kindnesses.

"Jim, I understand you were not feeling well on Tuesday afternoon and evening. Sometime in the middle of the night you cut your

wrist and then jumped out the window causing your injuries." He just looked at me. I could not tell if he comprehended, if he remembered, or if he were ducking the issue. At least, I had the event in the open.

Our days settled into routine. Our second floor apartment looked out onto South Wilson Street. The balcony caught the morning sun. If we looked to our right, palm trees and stucco roofs told us we were in California. If we looked to our left, a white frame house and a treeshaded street reminded us of the Midwest.

Our mornings were usually filled with phone calls. Some took care of business. The idea of moving Jim back on a government plane was explored with his supervisor. It finally seemed too difficult to arrange, so I made a decision to keep Jim at Huntington until he was able to fly by commercial airliner. I asked for first class tickets since first class seats recline more. Jim's floppy head required that. His right leg was still painful, and the incision down the side would be better protected in the wider first class seats.

I began searching for a rehabilitation facility near our home. In looking down the long road to recovery, I wanted the best, but I also wanted the facility to be convenient for certain people to visit Jim because they could stimulate his mind in ways therapists could not.

I thought first of the world-renowned Johns Hopkins University Medical School in Baltimore; it is within driving distance of our home. Bruce Marsh lives in Baltimore, and I felt Jim would be able to talk with him about this experience in ways he could not talk with anyone else. If Jim were nearby, Bruce would have an easier time getting to see him.

I asked Bruce to contact Johns Hopkins to see what kind of rehabilitation facility they

had. Bruce first gave me the name of the psychiatric facility there, but Dr. Suzuki said Jim did not need that kind of care. Bruce went back for further information and found that Johns Hopkins did not have the kind of rehabilitation facility Jim would need. The staff at Johns Hopkins referred us to Montebello Rehabilitation Hospital, which is connected with the University of Maryland Medical School, and to another hospital in Baltimore.

Our social worker Maria, who arranged for our transfer, suggested I find at least three facilities because if I chose only one, a bed might not be available when I needed it. The rehab doctor at Huntington suggested a facility in Washington for our third choice, and Maria began the process of seeking admission to all three.

Virginia, Jim's sitter, gave us a report each day about his progress. On Monday, she reported a good day. Everyone had commented on how much better he was doing. He had been mixed up only once, after the psychologist did cognitive testing.

That afternoon his last physical therapy session was from 4:00 to 4:30. Margaret, Melissa, and I were waiting for him in his room. The therapist asked Jim to wheel himself back to his room to see if he knew the way. This required coming out the therapy room, turning right down the hall, going to the second door, and turning right into his room. He made it down the hall, but turned left into the room across the way. The patient there was an older man with his own cognitive problems. Jim wheeled himself in, looked at a man he had never seen before, and said in a voice we heard across the hall, "Hi, there, John. How ya doing, you old fart?"

That night when Bob, the nurse who had taken care of him many nights, brought his tray, Jim turned to me and said, "I don't know who that man is. He is really nice. I see him at the hardware store all the time and I write him little notes."

Jim and I talked that evening about what had happened. He told me how awful he had felt Tuesday night at the meetings. I told him that we needed to find out why he had felt that way and that the doctors were willing to work with us to do so.

On Wednesday, Melissa and I took a one-day vacation to Mexico. A tour bus picked us up at the Pasadena Hilton at 9:00 A.M. After changing buses in downtown Hollywood, we spent the afternoon shopping in Tijuana. We expected to be back around 7:00, but because of several mixups our bus did not arrive back at the Hilton until 10:30. That was the only day in nine weeks I did not go to the hospital.

Melissa's visit sped by. On her last evening she and I left the hospital for dinner. We discussed the ways our lives had changed.

"Mom, I think I've grown up a lot," she said. I could only agree. She had become responsible for herself at a time when her parents could not be there, and when Jim and I returned, we could not make her, nor did we want to, into a child again. At sixteen she had flown across country by herself, taken on the responsibility of a car, continued getting straight A's in school, and lived with a family who enjoyed her so much they still tell me they miss her. She had spent a week in California, and other than our day in Tijuana, most of it had been spent in a hospital visiting a father with severe cognitive deficits. I never heard a word of complaint from her.

It is no wonder I missed her.

Chet called me the next week. "I coach my son's team," he began, "and the other coach is a doctor doing graduate studies in endocrinology."

Chet mentioned to the doctor that Jim had complained of numb legs for several years as well as feeling low and depressed, particularly the two weeks before going to Pasadena.

The doctor had replied, "When the legs, feet, and hands go numb, that can be a subtle indication of a thyroid that stops working."

I was stunned. Never had I connected numb legs with the thyroid. In 1982 Jim went to our family doctor to find out why his legs were numb at times. He was sent to a neurologist, who had tests done in which electrical impulses are sent through the muscles. The tests showed a problem, but the neurologist could not determine why. "It will either get better or worse," he had told Jim. "If it gets worse, we will have to do further studies." Jim had not complained of the numbness getting much worse until the week before his trip to Pasadena, when he told me it was spreading to his hand.

Chet went on to tell the doctor that Jim had had radioactive iodine therapy for an overactive thyroid in 1970.

The doctor winced and said, "We now know that the thyroid almost always stops working after that therapy."

Chet spoke of Jim's attempted suicide. "That is entirely in keeping with a thyroid that shuts down," the doctor responded.

I now had several points of information I wanted to know more about. Jim had had Graves' disease; he was given radioactive iodine to treat it; he was now called hypothyroid (meaning low thyroid); and it had been suggested that the numbness he had felt off and on for seven years could be connected with a thyroid problem.

The library at Huntington Hospital beckoned. Libraries have been an important part of my life. In Newton, Iowa, where I grew up, we had a Carnegie Free Public Library run by a member of the Maytag family. To me it was the most interesting place in Newton, and the books I checked out transported me far beyond the cornfields that surrounded my town.

At Grinnell College, I learned more about the research process. In a freshman health class in the spring of 1956, I was required to write a research paper on a topic of interest. I chose to write about my brother Duane. Searching the periodicals and health books I found many theories about the causes of Mongoloidism. A popular theory said an illness

in the mother during the first three months of pregnancy might cause the problem. Since my mother had a serious case of flu early in her pregnancy, that theory seemed reasonable. I got an A on my paper.

The main value of that paper came to me ten years later when two medical students mentioned in casual conversation that the medical field now knew Mongoloidism was caused by an extra chromosome present at conception. The most up-to-date information of 1956 was disproved by a discovery in the early 1960s. From then on, I did my research with a bit of skepticism about the finality of any statement, and I always tried to get the most recent statements on any subject.

I also learned that terms change for now Duane is referred to as having Down's syndrome.

Margaret and I went to the hospital early one afternoon to see what we could find out about the thyroid. We started with a book on endocrinology with a full chapter on hypothyroidism.

The computer data now suggests that hypothyroidism occurs within a year after therapy in from 12 to 90 percent of patients treated for Graves' disease. That surprised me. Up to 90 percent have hypothyroidism within a year, and Jim's was not diagnosed until eighteen years after his treatment. This surely placed him in a rare position.

One of the reasons for the variation in frequency of hypothyroidism suggested by the current data was the use of antithyroid drug therapy prior to treatment with iodine. Reading that, I recalled that when Jim first went to the doctor in 1969 for his overactive thyroid, he was given a drug which inhibited the thyroid gland from producing its hormone but did not cure the overactive thyroid. Jim was told he could stay on the drug for a while but that he would have to go off of it for six weeks before he swallowed the radioactive iodine.

Jim got the prescription filled for this drug, propylthiouracil, at the pharmacy at the

clinic where he went. After several months, he went back for a follow-up appointment with the doctor, and the doctor became very upset that the pharmacist had continued filling the prescription. Remembering how upset the doctor had been, I wondered if this incident had influenced the course of Jim's disease.

The book went on to state that following the first year after iodine therapy, hypothyroidism continues to develop, probably indefinitely until all of the population at risk has developed the disorder.

When hypothyroidism develops long after radioactive iodine therapy, this hypothyroidism is preceded by *a long period of subclinical hypothyroidism*. I thought back to the preceding years when it seemed that Jim often ran out of gas on Saturday night and did not want to expend the energy to go anywhere.

Reading on I discovered a paragraph entitled "Transient Hypothyroidism." Following radioactive iodine treatment for an overactive thyroid, a period of hypothyroidism often develops. During the time the thyroid is overactive, the pituitary gland cuts back on the production of thyroid stimulating hormone (TSH) because of the excess secretion of the thyroid gland. Following therapy, parts of the thyroid gland that are overactive are destroyed, and the production of thyroid hormone gradually decreases. When production reaches subnormal levels, the pituitary gland must then start to secrete TSH, which may take some time since the production of TSH has been suppressed during Graves' disease. Thus, production of thyroid hormone may remain low for a long time.

Reading this I thought back to the period in 1976 when Jim's thyroid hormone had dropped to the low normal level and he was feeling very like he did prior to coming to California. I had argued with the doctor, who was a specialist in stomach problems, because I thought Jim had a problem, and I had been told I did not know what I was talking about. Now I knew I had been right back then, and I knew that most of Jim's

symptoms before his trip to Pasadena had been caused by the thyroid.

Thyroid hormone affects every organ in the body, and therefore symptoms of hypothyroidism can be many. Puffiness around the face is a characteristic appearance of someone with hypothyroidism. A picture of a patient suffering with hypothyroidism reminded me that on occasion in the preceding year I had sat at the dinner table and thought that Jim looked very fat around the jaws. At other times he did not. Both Steve and Chet had mentioned to the social worker the same fullness in Jim's face even though he had not put on weight.

The nervous system is affected by the thyroid hormone, and low hormone causes tiredness, lethargy, fatigue, and depression. A person suffering from lack of hormone may become physically clumsy. I recalled that in recent months Jim often stumbled when he got up from a chair and took his first steps. His movement reminded me of someone who has arthritis and for whom those first steps might be painful. However, when I asked if he hurt, he told me no.

Muscle cramps are common in hypothyroidism. I remembered how often in the preceding months Jim had wakened and told me that the calves of his legs ached and felt cold.

Headaches may be prominent complaints in hypothyroidism. Headaches—I had forgotten to mention those to any one. Over the past year, Jim had had a series of unexplained headaches. Tylenol had not helped, and we could never find a trigger for them.

The gastrointestinal system is affected. I read that the tongue is often enlarged and remembered that before coming to Pasadena Jim had stuck his tongue out to show me it was sore.

In 1976 when I thought he had a low thyroid, he had complained of stomach pains. During the months before his trip to Pasadena he often complained that what I cooked upset his stomach. One night it was the beef, one night the chicken. After a while I tuned out the

complaints because it seemed everything bothered him. Now I read that hypothyroidism caused gastric problems.

Sleep can be disturbed in hypothyroidism. A patient may need much more sleep but also may have insomnia and sleep apnea. Each time I thought Jim's thyroid was low, one of his symptoms was the inability to stay asleep. I would note him falling asleep but waking up, sometimes in a minute or two, sometimes in fifteen minutes or so.

The final section on hypothyroidism talked about lab tests. The most common tests for hypothyroidism are called tests of T3 and T4. I did not understand all of the technical terms about these tests, but two things stood out. The first was that serum T4 concentrations need not be below the range of normal in the presence of significant hypothyroidism. The second was that in 20 to 30 percent of patients with overt hypothyroidism the tests show normal serum T3 concentrations. I remembered that first day when the trauma doctor told me Jim's thyroid tested normal, and I had told myself further testing was needed.

I acknowledged that in 1976 when the doctor did these two tests, it was possible the data base was not large enough for him to know these facts. And I will never know if a test for thyroid stimulating hormone was done then.

The test for TSH, thyroid stimulating hormone, thus became very significant in diagnosing Jim's thyroid problem. Even then, his TSH level was above normal but not significantly high.

My research caused me to rethink how I had handled this event. I remembered back to what the endocrinologist had asked me. "What made you think he had low thyroid?" was the question I remembered.

"He was cold, tired, and depressed," I had answered.

Because the question was asked in that way, I was required to be knowledgeable about

thyroid, and there was a whole lot I did not know. What if the doctor had said, "Tell me about your husband's physical self." Would I have been able to remember the headaches, stomach problems, and muscle cramps. What if the doctor had asked, "Does he have headaches? Have you noticed any changes in his movements? Has he put on weight?"

I realized then that for all the tests, the medicines, and the new surgical treatments, diagnosis still depends a great deal on communication and how questions are phrased.

In all fairness, the endocrinologist never had the opportunity to question Jim directly, to note his physical features prior to injury, to watch Jim walk, and to check such things as his reflexes. All this would have made his job easier.

Looking back on the preceding year, I asked myself how we could have missed all those symptoms and not known that something was drastically wrong. I was comforted by a statement I read that the recognition of hypothyroidism may be difficult because of its insidious onset and slow progression. Jim's condition had been coming on gradually for seven years if the numbness in his legs was the first sign of the problem. Each development was such a minute change from the previous one that it raised no alarm. Only in looking back did the full picture become evident to me.

The book I was reading was copyrighted in 1989. The library also had a copy of the same book copyrighted in 1979. I noted one significant change. In 1979, the data showed most thyroids fail following radioactive iodine therapy. By 1989, the data was more complete, and the statement was made that hypothyroidism is a nearly inevitable consequence of iodine therapy. In 1970, Jim had been told only that the thyroid might fail.

The lessons of my research paper on my brother Duane came back to haunt me. The most up-to-date information in 1970 had changed by 1979 and again by 1989.

One other line in my research jumped out. It cautioned that the metabolism of many drugs is prolonged in hypothyroid patients and care should be exercised when anesthetic, analgesic, or sedative drugs are given. Jim had gone for a month after his injury taking all those drugs before starting thyroid hormone.

I had dated the decline in my marriage to the summer we had cared for Jim's mother. Probably that date corresponded to the time when Jim's thyroid started its decline. Perhaps I had attributed the problem to the wrong cause.

TWO STEPS FORWARD, ONE STEP BACK

Then the setback came.

The second week in April several of Jim's colleagues were due back in Pasadena for another conference and wanted to see Jim. I wanted Jim to be coherent when they came by, and I felt he needed to make contact with people before then. It took some finagling, but I arranged for him to receive phone calls each evening. His days were taken up with therapy. Exhausted from therapy, he needed a nap. Following that was dinner. It was seven o'clock before he was free to talk, which meant it was ten o'clock for his friends on the East Coast.

I asked Bruce Marsh to be the first to call. When I arrived at the hospital the day of the planned call, Jim was convinced he was going to die. Gas pains rumbled through his stomach. Even in the midst of his agony, though, he seemed better, for he told me he wanted to live and was afraid of dying. He said he appreciated my being there and would not have made it without me.

When I told him Bruce was going to call, Jim started an imaginary conversation. "Oh, Bruce," he moaned, "I feel awful. I don't think I'm going to make it. If I don't, I want you to know it's been nice to know you."

When I reminded him that Bruce had not called yet, he said, "I know. I'm just practicing."

Jim's sister and her husband called just at the time I was expecting the call from Bruce. I let Jim talk to them, and his voice was so low and lethargic they did not know how to handle the conversation. After all the good reports I had been sending, they were shocked. I tried to explain he was sick.

When Bruce called, Jim perked up. Bruce asked Jim how to set the bearings on his Model A Ford, and Jim responded in accurate detail. However, when Bruce asked about the

weather, Jim said, "It's about zero outside here, and I think its supposed to snow."

Bruce was still ecstatic and told me, "The old Jim is still there."

Jim's stomach agony increased. I asked him if he wanted to listen to music. "Yes," he responded, "play some of that stink music so this gas will go away." Such statements always caught Margaret and me by surprise, and we had to stifle laughter.

"Please," he said, "get the nurse to punch a hole in my stomach to let out this gas."

"Jim," I tried to be calm, "we can't do that."

"Yes, you can. Just get her to drill a hole. Don't give me any guff about it. She can do it."

When the lab technician came in to take a blood test to determine what the problem was, he gave her the warmest welcome she had probably ever received. "Oh, thank you for coming!" Unfortunately, doing a blood test did nothing for letting out the gas.

Nothing showed up in the lab or stool tests as to the problem. He started on anti-diarrhea medicine which helped slow it down.

He started giving orders to the people around him, calling his roommate "crude" and telling him to turn off the television. "Hey, be quiet over there," he yelled to the nurses talking to his roommate.

At one point, Margaret asked him if he had pain, and he commented, "I don't have any area of concentrated pain. I just hurt all over." That was a pretty complex word pattern.

Jim tried to tell me he was being sabotaged by the Russians and that was why he was in the hospital. Dr. Suzuki told me intestinal upsets often make people think they are being poisoned so Jim's reaction was typical.

I spoke with Dr. Suzuki about Jim's thyroid problem but did not have an opportunity to relate all I had read. I was just too tired. Since the endocrinologist stated Jim's thyroid tested slightly low, Dr. Suzuki did not feel that was the major cause of his depression. Therefore, he was going to start Jim on an anti-depressant. This was good news in a way because he had stated he would not start Jim on any medication until his cognitive functions improved.

The medication (Norpramine) takes two weeks on a dosage of 100 mg per day before any benefits are noticed. Jim was started on 10 mg per day. If he tolerated that, the dosage would be increased gradually.

His diarrhea continued two days before easing. Jim had two good days of therapy, and one afternoon he was still sitting in his wheelchair when I arrived at 3:00 P.M. Virginia, his sitter, had taken him for a ride all around the gardens at the hospital, which he had enjoyed.

Jim started receiving surprise visitors. Colleagues from back east were in town, and several stopped by to see him. Jim weighed forty pounds less than what he had prior to his injury so I am sure he looked very frail to them.

I began to learn more about the speech therapies. The therapists always invited me to sit in on Jim's sessions, but I chose not to for many reasons. First, most of them took place in the morning and early afternoon. Since I had to be at the hospital the entire evening, I needed the morning for myself. Secondly, I felt Jim would rely on me too much if I were there. I wanted to make sure he did the therapy. I wish now I had learned more about the process.

When the therapists first started working with Jim, they asked him a series of questions that could be answered yes or no, e.g., "Is a handkerchief smaller than a pillow case?"

After that they moved on to more complex processes. As Jim became more aware, he read the questions himself. The first words were in fairly large letters. From questions, they went on to paragraphs and then to gradually

smaller print to help his eyes focus. All the time he was in Huntington, he continued to make good progress in the speech therapy part of his program.

The diarrhea, though, still erupted. Bob was his nurse one night when it was particularly bad. Jim and everything around him needed cleaning. Fontella, who was working in another section, had been particularly helpful and nice during our stay. She came in to help Bob clean up. Bob left to go get new sheets while Fontella waited.

Jim tore in to her. "Look at her standing there. She's just lazy and stupid. Why doesn't she help get this mess cleaned up?" His outburst surprised and hurt Margaret and me as much as it did Fontella. This was not the Jim Marsh we knew.

Later he said, "I'm just no good and useless." I wondered then if he were mad at himself.

In physical therapy he had graduated to using a walker and could walk halfway across the physical therapy room, but he seemed agitated and confused at other times. One day when I arrived, he pointed to some balloons tied to the end of his bed. "When I looked up at the ceiling," he said, "those balloons were peeing. Why don't you take them down?"

After stifling my laugh, I realized one was hanging down and leaking air. "Taking a leak" is sometimes used to mean peeing and so maybe he was not as far off as I thought.

Jim became more aware of his feelings. One day he asked what would happen if he did not want to go back to work. "That decision will have to be made down the road," I responded. "The therapy will help your mind, and things will be better when you can move around. Then we will decide the future."

He expressed concern that he would end up a bum on the street and that Mathew and Melissa would not understand.

"We are not going to desert you, and Mathew and Melissa will understand," I reassured him.

Michel arrived from France on Saturday, April 8. I left them alone for half an hour. Michel did not intend to speak of work, but Jim kept bringing up the subject. Michel told me later he was impressed with the details Jim interspersed in their conversation, details Michel had forgotten. There was no confusion. This conversation was the most encouraging sign so far that Jim's mind might eventually be O.K.

When I joined them, Jim appeared to let down, as if the effort had been difficult. His speech became confused, and he talked about my cooking dinner for Michel.

The next day his diarrhea returned. It was Sunday, and there was no therapy. We arrived at the hospital at 3:00 P.M. to find Jim still in bed and not dressed. His cousin Carol was with us, and I asked her to get Jim dressed because several of his colleagues were waiting to see him. She noticed blood in his diarrhea. Visiting with colleagues he was lethargic and very, very thirsty.

Two days later, I began hearing complaints that he had fallen asleep on the mat during therapy. Virginia and the therapists told me he seemed drugged.

When I arrived, he said, "Phyllis, they are drugging me so I won't give them any guff."

I was concerned and asked the social worker if I could refuse the anti-depressant. She said I could but suggested I talk with the doctor.

When Dr. Suzuki came in, he agreed Jim seemed drugged and canceled the prescription. Jim was receiving 40 mg per day of the Norpramine, far less than the 100 mg for two weeks needed before any change in his moods could be noted.

When I mentioned to Dr. Suzuki that Jim seemed more aware, he gave Jim a series of questions to check his orientation. Jim got all of them right.

On Wednesday, April 12, Maria, our social worker, told me National Rehabilitation Hospital in Washington would accept Jim as a patient. Washington was not my first choice,

but I wanted to go home. Living in Pasadena was costing me almost \$1000 a week by the time I paid \$37 a night for my apartment, \$33 a day for the rental car, and \$74 a day for the sitters. I was ready to get back to my world. Jim and I discussed the situation and agreed we would go to Washington.

That evening Jim's supervisor and two other colleagues came to visit. I told them we would be leaving the following week for Washington.

The first memory Jim had of his stay at Huntington was this visit from his supervisor. It happened seven weeks from the day of his injury and marked the end of what is called his post-traumatic amnesia, a condition quite common in head trauma patients. The date is significant because post-traumatic amnesia that lasts twenty-four hours indicates a serious head injury; anything over one week in duration is considered very serious.

The next day Margaret dropped me off at the hospital so I could make further arrangements for us to leave. I walked in to disaster; Jim was delirious with a temperature of 102 degrees.

The doctor who headed the rehabilitation unit talked with me about his concerns. Jim's blood and stool tests had come up negative. He suggested calling in a gastroenterologist, and I quickly agreed.

Never have I seen nurses work as hard as Jim's did during the next few days. The diarrhea persisted. Everything on the bed would have to be changed only to have the same thing occur within a half hour.

Jim was too weak to go to therapy. Again he said, "Phyllis, they are trying to kill me here."

The gastroenterologist was concerned that Jim's mother had suffered from ulcerative colitis for many years. Although it would have been unusual for Jim to develop the condition suddenly at this point in his life, it was possible, and therefore the doctor wanted to do a colonoscopy.

After the gastroenterologist examined Jim, he said, "The record says something about your husband being exposed to radiation in the work place."

"Huh," I responded. "I've never said that."

When the resident in gastroenterology came by, he said, "The record says something about your husband being exposed to radiation."

Again, I denied it, and wondered where that idea could be coming from. When I asked the head nurse, she said she had also read that. "But it isn't so," I said.

One of the doctors who had seen Jim in ICU had written up a medical history based on the information I had given the social worker. He stated Jim had been exposed to radiation in his work place.

Then I realized how true to life the game is where one person whispers a phrase to the person next to him, who then whispers it to the next person, and so on through several people until the phrase comes back totally changed.

I had spoken of radioactive iodine treatment to the social worker who called. She passed the information to the doctors treating Jim. One doctor, who never spoke to me about Jim's medical history, entered into Jim's record that Jim had been "exposed to radiation."

Because Jim's occupation was listed as geophysicist, no one questioned the truth of this statement. It made me wonder what else could be in error in Jim's medical history.

Margaret left for home on Thursday evening, the day after Jim's supervisor visited. She had stayed three and a half weeks, and Jim had no memory of her being there. It is another way we date the length of his post-traumatic amnesia.

I had recovered enough to stay alone.

The colonoscopy took approximately forty-five minutes with Jim sedated. The results showed colitis, an inflammation of the colon. The lab tests were inconclusive as to whether it was ulcerative colitis or a non-specific inflammation,

perhaps caused by a reaction to all the drugs. Either way he would be started on prednisone (a steroid) and asulfadine. He could go back on regular food but with low fiber.

In follow-up studies on Jim's thyroid, the endocrinologist found Jim's TSH level was still slightly elevated after taking thyroid medication for a month, so his dosage of Synthroid was upped slightly. The doctor indicated Jim essentially had a non-operating thyroid and would have to remain on medication for the rest of his life.

I asked the doctor if it was rare for Jim to still have thyroid activity eighteen years after taking the iodine. He responded, "Jim is in the statistical minority of less than one percent." When I told him Jim had taken the propylthiouracil longer than he was supposed to, the doctor agreed that this could have caused Jim's thyroid to respond differently.

Dr. Suzuki wanted to start Jim on an anti-depressant, but I feared Jim's super-sensitive digestive tract would object. I was not convinced Jim needed it anyway. "Doctor," I told him, "prednisone is going to make Jim feel better. They are going to up his thyroid medication, which is going to make Jim feel better. The anti-depressant is not going to take effect before we get to Maryland next week. Why take a chance on upsetting his digestive tract? Let's wait until we get back to Maryland to start it." He agreed.

While I felt Jim's problems were caused by thyroid, no doctor said that, and I did not want to take total responsibility for Jim's diagnosis. I felt if he showed up in Maryland on antidepressants, the doctors there would rely on the diagnosis at Huntington. I wanted their independent judgment. I vowed to myself that for safety's sake I would listen to the experts in Maryland. If they decided Jim needed antidepressants, I would agree.

As Jim's diarrhea was brought under control, we looked forward to our return to Maryland. Montebello Rehabilitation Hospital in Baltimore sent word they would accept Jim

for treatment. Now I had a choice. Baltimore had been my first choice because I felt Bruce Marsh would help Jim recover. Montebello was connected with the University of Maryland Medical School, and I had always heard that facilities connected with medical schools are in the forefront of new techniques.

Something within me urged me to go to Montebello. At times in my life, I have had ESP, and I have learned to heed these feelings no matter how many times I have been told they are stupid. I had the feeling that in the long run something at Montebello would make me glad I had chosen it.

Preparations went forward for our flight across country. The only non-stop flight from Los Angeles to Baltimore left around noon and arrived in Baltimore at 8:00 P.M. Montebello arranged for us to be admitted that evening. Cousin Carol would drive us to the airport, and our neighbor, whose car has a front seat that reclines, would meet us in Baltimore.

Jim had not been outside the hospital since his injury, and I was concerned about overstimulation on the trip. We started sitting outside the front entrance of the hospital. Cars zoomed by on Pasadena Avenue, and some came up to the entrance to drop passengers off. One evening I pushed Jim's wheelchair around the outside of the hospital stopping in the parking lot to show him my car.

Great discussions took place about the physical problems we might encounter on the flight. The staff at Huntington wanted the trip to go smoothly. Since Jim could not walk without a walker, going to the bathroom on the plane might be difficult. Some suggested the use of a condom catheter and adult diapers. "I'll handle what has to be handled," I told them.

The nurses decided among themselves that Jim would probably be O.K. in the long run. I knew they were not experts, but they had seen a lot of rehabilitation and I appreciated their judgment.

Dr. Suzuki came to say goodby. I appreciated the way he had always shown concern for me as well as for Jim. He told me he and the neuropsychologist had determined Jim would be safe traveling with me. They found no overt indications Jim was suicidal.

Then he added, "Mrs. Marsh, I think the long-term prognosis for your husband is probably going to be good. He has come a long way in a short time, he had a high IQ prior to his injury, and he has a strong family support system. All those contribute to a good recovery."

His encouragement stuck with me for a long time.

Two days before we left, I walked in to Jim's room and for the first time thought, "He looks healthy." Jim told me that day he felt like his head was much clearer. A cousin came to visit that night, and we had a good conversation with no mix-ups in words.

April 26, 1989, arrived—nine weeks to the day I left Maryland. All I had accumulated had been shipped ahead. Our bags were packed.

Jim and I said goodby and departed with tranquilizers, pain killers, motion-sickness pills, urinal, an extra change of clothing, and the determination that nothing was going to stop us from going home. "Remember," I steeled myself as we said goodby to the security of Huntington, "no airline is going to inconvenience three hundred passengers and land a super jet short of its destination because of a little diarrhea. If you make it to the plane, you will have help with any problems."

SETTLING IN

At the airport we were met by a travel agency representative who aided us because we had two first class tickets and needed wheelchair assistance. She took us into a VIP lounge to wait. Our flight was delayed slightly. Jim rode in the wheelchair to the door of the plane and by grabbing walls and seats walked to his assigned place.

The day was clear, and flying out over the ocean before turning back toward land, we enjoyed a spectacular view of the California coastline. Our royal first class treatment, from hot towels for our hands to wine lists and a meal served in three courses, helped us forget Jim's illness.

Touchdown came at 9:30 P.M. We were both too exhausted to celebrate. Jim visited with our neighbor while Mathew and I searched for his bags, and then Bruce Marsh guided us across Baltimore to Montebello Rehabilitation Hospital, where the guard was expecting us.

Montebello was built by the state of Maryland in 1957 as a chronic disease hospital. The dark brown tile floor and turned-out lights cast a dreary mood over its antiquated decor. An early heat wave had hit long before the air conditioning was turned on for the summer. The four-bed room where Jim was placed had patients in an earlier stage of head trauma, and a sign above one bed stated in big letters, "Patient subject to seizures." I felt as if I had gone backward in time to the 1950s. The one bright spot was Joy, the nurse in charge, who seemed caring and competent.

"I'll be O.K.," Jim said, and with much trepidation I left. After nine weeks, I yearned for my own home and my own bed.

Mathew took off work the next day to drive me back to get Jim settled in. He had been moved across the hall to a room with patients

near the end of their stay. A surprise awaited us, for in the next bed was a prisoner of the State of Maryland. He had round-the-clock armed guards, and every eight hours there was a shift change that included a transfer of guns and manacles.

Several things impressed me. Jim was assigned a primary nurse who was responsible for his care. That seemed logical. He had had difficulty keeping the nurses straight in California.

The therapy program was designed so Jim would have a set schedule for the whole week, much like going to work. He would have one physical therapist, one occupational therapist, and one speech therapist and would get to know them.

He would be given a journal with his schedule written on the cover. After each session the therapist would write in the journal what had been accomplished so Jim could have a written record of his progress.

These were small changes, but for a confused mind they could have significant impact.

Still concerned about my choice, exhausted from everything, and suffering cultural shock coming from Pasadena, I asked the doctor when I met him, "Did I come to the right place?"

He responded, "You have come to the best place in the state of Maryland and one of the best in the nation for what you need."

When the psychiatrist came to talk with Jim, I asked her the same question. "Yes," she responded, "this may not be as fancy as you are used to, but this is where you should be."

That afternoon the comments of the X-ray technicians who had heard someone was coming in from California should have

comforted me. They assumed that we were California residents and I had brought Jim across country for the therapy program at Montebello. Their pride in Montebello's program told them such a move was logical.

But as Mathew and I stood in line at Wendy's for supper that evening, I started giggling and could not stop. "Mathew," I said, shaking my head, "how did we get here?" I thought of the armed guards sitting next to Jim's bed. "Who would have dreamt we would end up in a situation like this?" Mathew had no answers.

My friend Marti had cautioned me that the flight across country would lead to setbacks. "Don't tell me that," I had wanted to say. Of course, she was being a friend.

That first weekend many friends came to encourage Jim. They would speak, and their words seemed to go through him. Nothing of Jim came back. One colleague felt he did not recognize her. There was no way to explain that he had been doing so much better in California.

At first a rehabilitation hospital seems depressing. Bruce Marsh's introduction at night was probably more so, but he did some research and found out the same thing the doctor had told me.

Montebello is dedicated to helping people who need retraining in how to live because of an injury or illness that has caused a loss of function. Its head trauma unit deals exclusively with people who have suffered head injuries that can totally change them.

On the first floor of Montebello were a spinal cord injury unit and a multiple trauma unit. On other floors were stroke and orthopedic units. Approximately every third person was in a wheelchair. Even the wheelchairs were unique, for some were rigged with traction units, some were motor powered, and others were designed to accommodate a wide range of orthotics.

Jim's unit had a sign above the entry that proclaimed, "Head Trauma Unit—#1 in the State of Maryland." I objected to the sign. I did not

want Jim's colleagues to read it. Why did I need to advertise his head injury?

The unit is self-contained. The nurses' station is just inside the entrance; the dining room is across the hall and the patients' rooms are located on either side. At the end of the hall are rooms for physical, speech, and occupational therapy.

Dr. Drubach, who was Jim's primary physician and directed the program, is a neuropsychiatrist. He is both a neurologist and a psychiatrist with a specialty in rehabilitation of head-injured people.

The head trauma unit is connected with the University of Maryland Medical School Shock Trauma Unit, which is world renowned. Dr. Drubach had many years of experience with the Shock Trauma Unit.

A neuropsychologist with specialized training in the interrelationships between the brain and behavior worked full time on the unit. He tested the cognitive functions of a patient's brain to determine the way it had been changed by the trauma it had sustained. Using the results of those tests, an individual program of rehabilitation for each patient was planned.

A social worker, whose office was near the therapy rooms, worked full time with the patients and their families to plan for discharge and the future.

Barbara, the nurse assigned as Jim's case manager, called me regularly to discuss Jim's progress. In one of her first calls she asked me when Jim liked to shower or bathe. I explained that each morning he shaved, showered, and dressed before eating. "I will put that down for his schedule," she responded. It was such a small thing, but what better way to bring Jim back to his regular living patterns than having him actually do them.

There is no therapy program on weekends at Montebello. As soon as a patient is able, he goes home on Saturday and returns Sunday. That first weekend Jim and I basked in the sunshine on an outside patio enjoying the

pink azaleas. There I discovered the brown highlights in his hair. Several times in the previous three or four years I had told Jim his hair was changing color—to a dull black. Its healthy vibrant glow six weeks after he started thyroid medication was another clue that Jim's thyroid had been low for a long time.

All the next week the therapists evaluated Jim's progress and planned a program of rehabilitation. Jim was uncooperative. One afternoon I found him standing next to the nurses' station phone insisting the next phone call was going to be from his congressman getting him out of there. All day he had told the nurses and therapists on the floor that Dan Quayle's office was interested in his progress, and Dan Quayle's office would be calling.

One of the nurses took me aside to explain that Jim had tried to sign himself out of Montebello. Since the hospital cannot keep someone against his will, members of the staff had held a hearing to determine Jim's competency to sign himself out. The hearing determined he was not competent to do so. He had no idea where he was; a sitter was still assigned full time to keep him from wandering off.

Jim objected to the walker. The orthopedist had stated Jim was not yet ready to bear his full weight on his broken bone, so his arms bore part of the weight with the help of the walker. That day Jim carried the walker down the hall, saying, "See, I don't need this." His therapist took it away, and he was confined to his wheelchair.

It was a complicated scene. The nurses began educating me about changes in personality and behavior that accompany head trauma. Confabulation is defined by the Maryland Head Injury Foundation as the elicitation of imaginary things and events to fill in for lapses in memory; it is not lying, but an attempt to make sense of poor memory. Patients usually do not realize they are confabulating.

The staff did not know for sure that Jim was confabulating. They knew he was a highly

respected geophysicist with NASA and were not certain if Dan Quayle's office might call. His nurse, Barbara, finally said, "Dan Quayle is not my boss." I informed them Dan Quayle had never heard of us.

Another change in behavior caused by head trauma is called perseveration, which is the repetition of speech or an activity. A patient who has suffered head trauma may have difficulty changing topics.

Jim could not turn off the idea he knew Dan Quayle. The problem was complicated further because Jim had done some studies in assertiveness, and many times used what is called "the broken record technique" to accomplish certain goals. In that technique, a person keeps repeating the goal until others are forced to respond. That day I had a hard time distinguishing between perseveration and "the broken record technique."

Jim's agitation disrupted his healing. A tranquilizer was prescribed to calm him down, but it also made him less responsive to visitors.

Bruce began coming in almost daily for a few minutes. Jim smiled when he entered but contributed little to their conversation. Bruce would talk about his woods in Maine, where we had visited the previous summer, or he would ask Jim questions about Model A Fords. Jim would seem to listen, and so Bruce kept talking even if Jim made no comments. At no time did Jim laugh, and this bothered me, for he had had a delightful sense of humor.

On Monday, a week and a half after Jim arrived at Montebello, I took the day off from the 124-mile round trip to visit him and attended a sports banquet with Melissa. Mathew spent the evening with his dad in my place. Jim did not eat his supper because of pains in his stomach. Mathew was concerned when he left, but Joy was Jim's nurse for the night and Mathew had confidence in her.

At 11:00 P.M. I called Joy. A doctor had checked Jim several times, and they were not certain what was going on. She explained that

since Montebello had no X-ray or lab technicians on duty at night, if an emergency developed, patients were sent by ambulance to a nearby hospital.

At 2:30 A.M. the doctor called to say Jim's stomach pains had gotten worse, and they were transferring him by ambulance to the University of Maryland Hospital for evaluation. Mathew, expecting the call, insisted we leave immediately.

The University of Maryland Hospital, in the south end of Baltimore, has an armed guard in the emergency room in the middle of the night to keep the homeless from overwhelming it. A few people were waiting there when we arrived, some who would fall asleep and end up on the floor, only to be poked and awakened by the guard and told to sit up.

Since Montebello had not called 911 but a private ambulance service which was slower to respond, we arrived at the hospital well ahead of Jim.

Jim stayed in the emergency room all day for the doctors were puzzled by his condition. He had no bowel sounds, which showed a disturbance in the digestive tract. Diagnosis was complicated by the prednisone he was taking for the colitis. Prednisone, an anti-inflammatory drug, can mask several things, including an ulcer.

When Mathew and I returned from lunch, we found a very disturbed Jim. Left unattended, he had tried to get out of bed and could have broken his leg. Because there was no one to stay with him and because he could not be trusted to stay in bed, the staff had tied his hands down. This had agitated him, and he had gotten out of the bindings. They then tied him down by running a binding around his body as well as his hands. When we arrived, he was frantic, and the doctor asked us to stay with him so he could be untied.

After deciding Jim had an obstruction in the digestive tract, the doctors admitted him to a room on the eleventh floor. Though the hospital frightened me at first because we had

no primary doctor, it proved to be excellent. The system assigned each patient a team of doctors. At least one member of that team was on the floor at any given time to answer questions and direct treatment. Each team had a small number of patients, and I felt I could always get an answer.

The doctors determined Jim had an impaction in the bowel, and they treated it aggressively with enemas. Jim felt he was being assaulted, and he was, but the treatment worked quickly.

Two days later Jim returned to Montebello. His first words to Barbara were, "I'm glad to be back."

When we returned, the prisoner was gone. "Our luck has changed," I thought. At no time had I felt uncomfortable with the guards there; they had spent time talking with Jim. The prisoner, because of his injury, had not spoken much and had not been a problem. But the situation had been just too far removed from our life to aid in Jim's recovery.

GOING HOME

I was glad to be home. Mathew had taken good care of things in our absence. My own car was like a friend, and when it developed a problem in the universal joints and the master cylinder in the brakes, Mathew fixed it.

A cardinal took up residence outside my bedroom. A boom followed by the sound of wings scratching on the screen awakened me each morning as he bombed my window and then tried to stay in the air.

Sitting in the sunshine on the patio at Montebello watching the birds, I told Jim about my feathered alarm clock. "In California," he responded, "the gypsies believe it is good luck if a bird tries to get into your house."

My first thought was, "I think I have heard other tales that it is bad luck for a bird to try to get in." I knew Jim's mind was not very reliable for information.

My next thought was, "Phyllis, accept his response and take the bird as your symbol of good luck," and on that beautiful May day I did. Then, when the boom came, I told myself, "Yes, Mr. Cardinal, some day I'm going to have some good luck."

This incident hooked into something my mother had taught me long ago. "The sun will shine again," she always said when times were bad. It was understood bad times would come again also, but we would have our fair share of good ones along the way. My bird helped me keep my sense that all things come to an end, even illness.

As things settled down, I made an appointment to see my dentist. One of my teeth had cracked three weeks before I left Pasadena. Since my departure date had been so uncertain, I had not been able to have it capped there.

When I related what I was dealing with, my dentist responded, "Very often in times of

stress people grind their teeth at night, and they may not be aware of it." His words proved prophetic, for in the following months I had four teeth capped. Eventually, all four probably would have needed to be capped but not in the same year. This was one of the hidden costs of Jim's head trauma.

In fairness to my employers, I needed to let them know if I were going to return to work. My tournament bridge experiences provide the best analogy for why I decided not to return. In bridge, before the first card is played, a winner plans the entire game. Since that first card often determines the final outcome, there is only one chance to play it right.

If I had felt Jim would never return to work, I would have found a career job. It would have been in Jim's best interest as well as mine to do so. The professionals gave me no assurance Jim would return to work so that was a concern.

But now I had my chance to play the cards, and I decided I wanted, for my sake as much as Jim's, to gamble for a return to what we had prior to his injury. I wanted Jim back in his job and his hobbies so I could be free to pursue mine. The best chance we had to do that was for me to make Jim's therapy my major concern. Jim did not need to worry about whether I felt it was important for him to go to therapy during the time he was working so hard at getting well. He did not need the worry of wondering whether someone would be available to drive him.

One of Jim's colleagues likened me to Florence Nightingale for taking care of Jim. I could not explain that I was willing to spend my total energy for one year on Jim's recovery so I would not have to spend part of my energy on it for the rest of my life.

In bridge terms, my decision to go for Jim's return to work was the equivalent of bidding a game in four spades with a hand the experts would have passed. In quitting my job I was losing the first trick in order to control the final ones, and I was betting that my playing the hand would make the difference in bringing home the contract.

Our next goal was to bring Jim home for a weekend visit, what Montebello calls a functional therapeutic visit or FTV. Such visits help reorient someone who has suffered a head injury by bringing him back to familiar surroundings. They also help identify deficits that often do not show up in a hospital setting.

Jim needed to be evaluated before the staff could be assured he and our family could handle a home visit. A family conference was required; one had been scheduled and then postponed because of Jim's stay in the hospital.

Our conference took place Thursday, May 18, and was attended by the doctor, Jim's three main therapists, the neuropsychologist, a nurse, and a psychiatric nurse sitting in for the psychiatrist. Again, hope and reality were in conflict. Mathew attended with Jim and me, and we hoped for encouragement about the future.

Each staff member reported on Jim's status. First, the doctor was concerned about Jim's uncooperativeness. He said, "Time is running out for Mr. Marsh. We are passing the three month mark, and he needs to really work in the next few months or a window of opportunity is passing."

I had questions. "Doctor, physiologically what is happening in Jim's brain? Is there still swelling?"

There was no answer to my question. "Mrs. Marsh," the doctor continued, "your husband is on two stress hormones right now."

Confused by this, I asked, "What do you mean by stress hormones?"

"Prednisone is a steroid and a stress hormone. Also, thyroid hormone is considered a stress hormone. When your body is under

stress, your thyroid secretes more of its hormone because your body requires it. For example, thyroid increases the body's metabolism rate. Some of your husband's behavior may be related to this."

Therein, I finally found my answer to what had happened. The numbness in Jim's legs had begun when Jim was dealing with the stress of his mother's brain tumor. Over the years his thyroid had continued to slow down. The previous fall had been very stressful with the problems at work, the settlement of his parents' estate, and Mathew's decision to come home from college. At a time when Jim's body required more thyroid hormone, his thyroid was less and less able to produce it, causing a biochemical imbalance in his body.

The weekend before Jim went to Pasadena we spent a lot of time talking. I have always been a calming and soothing influence on Jim, and over that weekend he became calmer and probably required less thyroid. Thus he seemed better when he left that Monday. The stress of the meeting, though, had called for more thyroid, and his body could not produce it.

When I had spoken of the problems being solved, we assumed the resulting lack of stress had brought on a biochemical imbalance. We never considered what the stress had required of Jim's body in the first place.

Our conference continued with the therapists very clinical in their assessment of Jim.

"Jim walked around the unit one time without stopping. He still cannot walk in a straight line because of balance problems. We are working to get him to push off with his toes." This from the physical therapist.

"We are still working on movement in Jim's shoulders because there are some he cannot make," the occupational therapist reported. "He reached level seven in a computer game that we played, and he was able to work for twenty-five minutes without stopping."

Mathew and I pushed for a home visit that weekend. "I think it would be beneficial

for Jim to go home. He is not going to be truly oriented until he gets back into familiar surroundings. This weekend Melissa is going to the prom, and I think it would help Jim to be there to see her leave." I had my own broken record.

Again I was told, "Mrs. Marsh, we are concerned about your husband's safety. We need to be assured he will not do something compulsive. Remember he jumped out a window, and we do not want anything like that to happen again."

After being confronted with this statement several times, Jim decided to take action. "Just a minute," he said. "I did not jump. There was a scaffolding that fell."

There was a collective gasp followed by silence, and I was the one who answered. "No, Jim," I laid my hand on his leg as I spoke, "You jumped."

Finally the professionals recognized that I was not denying the suicide attempt. Their training teaches them that most people deny suicide; they had not realized that they were denying the possibility that I might accept what had happened.

As to Jim's safety in my care over the weekend, I explained, "I am fifty years old. Jim is the fourth family member I have had in rehabilitation. I took care of my mother-in-law after she had a brain tumor. I was involved in caring for my father following a stroke and my mother following hip surgery. I think I have enough experience to handle this weekend, and I have always been able to calm Jim down."

Jim showed flashes of his executive ability that day. Following what he considered negative comments about his physical therapy, he said, "Why don't you tell them the good things I did? I rode the bicycle ten times yesterday." I felt he was right.

The next day I arrived early at Montebello to go to bat for a home visit. A final decision could not be made until the psychiatrist cleared Jim. She was waiting at the nurse's desk for me.

"Mrs. Marsh, I find no evidence of depression in your husband, and I find no evidence he is suicidal." I agreed.

At no time during Jim's stay at Montebello had the staff suggested that he needed antidepressants. The thyroid medication and his continued recovery from the head injury were all he needed.

"My concern, Mrs. Marsh," she continued, "is that he is very impulsive because of the head trauma."

We talked about the safety factors involved, and I convinced her that Mathew, Melissa, and I could handle them.

"Then I feel your husband is ready for a home visit tomorrow," she concluded.

The only special instructions I received for the home visit were to be aware that people who suffer head trauma are prone to seizures. Jim had not had any, but I needed to be aware of the possibility. In the event of a seizure, the only thing I could do was make sure he could not fall where he might hurt himself. Then I was to notify the doctor so medication could be started to prevent them.

Saturday, May 20, was a warm, sunny day. We left Montebello at 9:00 A.M. As I drove us down Route 3, Jim started commenting, "There's where you turn to go to Ted's. There's where Melissa went to volleyball." What beautiful therapy the drive through familiar surroundings was.

Mathew and a friend were waiting to help Jim into the house, but using a walker he made it up the steps on his own. It had taken three months, but we had triumphed over the events of February 22.

In the afternoon Jim and I rode with Melissa to pick up a flower for her date for the prom. We needed to make some other stops, and Jim was concerned the flower might wilt. When I explained to my sister-in-law Jim had figured that out, I know she thought I was stupid. A geophysicist should be able to know that a flower might wilt in a hot car, but by then I knew

that a person who has suffered head trauma has difficulty in perceiving a problem that might arise and devising a solution to it. Jim's ability to look ahead to solve the problem encouraged me.

Several neighbors stopped by for a visit. I stayed close by Jim because I feared that his disinhibition would cause problems. Jim had exhibited his disinhibition in California when he called a nurse waiting to help him lazy and stupid. He had made many derogatory remarks at Montebello; some of the staff wondered if he had always been so difficult to get along with. The problem was caused by his head injury; his brain registered negative thoughts but had lost its ability to inhibit them from being spoken.

I did not want our friends hurt by his disinhibition, but since it was the result of his injury, there was no way I could guard against it. Luckily, he did not exhibit any of this behavior that weekend.

Melissa's date arrived in a black tux with a tie and cummerbund that matched the raspberry sherbet color of the prom dress I had made for her in the three weeks I had been home from Pasadena. Since Jim always took the pictures, we bought film for his camera and gave him the job of recording the occasion. It was another cognitive test, and he scored an A+.

Mathew and I were afraid Jim would balk at going back to Montebello, but Jim made no fuss. He told me later it seemed normal to him to be at Montebello. He was not aware enough to question it.

Several things improved after his FTV. The staff determined Jim could function without a sitter. An aide would still accompany him to the shower each morning, mainly because his balance was sometimes a problem. Otherwise, he was required to show up on his own at the proper times for therapy.

Bruce Marsh continued to come by each day. He noticed more of Jim was coming back at him in their conversations, and gradually there was more expression in Jim's face.

Jim and I discovered the cafeteria at Montebello, and each night we went out to dinner there.

One afternoon Jim said, "Phyllis, I was trying to recall the trips that we took. Do you remember when we drove through Maine?" We reminisced about each of the trips we had taken in our twenty-three years of marriage.

The next night, he started, "Phyllis, I was trying to recall all the trips to Europe I made. Do you remember when I went to Grenoble?" We tried to recall all the European trips, but I had difficulty because I had not gone on any of those. The next night we listed his ancestors. One evening, we did mine.

It seemed like we were turning on lights in the memory part of Jim's brain, and he was becoming a participant in conversations rather than a spectator.

O MONTEBELLO, I SING YOUR PRAISES

Jim took control of his life on Monday, June 5, 1989. During his third home visit, he had read all the get well cards he had received. By this time they numbered over a hundred, many containing very kind, encouraging messages. "This isn't a dream is it?" he commented as he emerged from the bedroom where I had piled the things from Pasadena.

"No," I responded, "it isn't."

That Monday a psychologist tested Jim's cognitive processes. The testing took most of the morning, with the doctor asking Jim several times if he were getting too tired.

The first entry in Jim's journal in his own handwriting is: "4:30 Tues June 6, 1989, meeting w/Dr. Kelly, Re: Test results." Jim made the appointment and on Monday afternoon asked me to be there.

Jim wrote his own notes during the meeting. Dr. Kelly was very encouraging about Jim's progress. Most things had improved, including his attention span, his control of behavior, his walking, and his balance. There was still much room for progress in concentration and memory of details. No cognitive function was missing, and in the problem-solving portion of the test Jim did as well as the average fifty-year-old. While all this was encouraging, it indicated the need for further therapy because Jim, prior to injury, had been functioning at a much higher level. Part of the problem was the speed with which his brain transmitted messages. This transmission is slower following any head injury but continues to improve long after other healing has stopped.

Questions arose about the types of therapy Jim should be doing. He had never enjoyed word games, computer games, or puzzles. A good part of therapy involves those

things because they stimulate brain pathways. After listening to Dr. Kelly, I asked about finding other things Jim might do.

"No," said Jim, "these people are the experts, and I'm going to do what they tell me."

From then on, he kept his own notes in his journal and would have the therapist sign his or her name. He became so cooperative that when his speech therapist decided she no longer had any program for him, he asked for further physical therapy. He is probably the only head trauma patient at Montebello who ever asked for more therapy, and the staff decided to grant his request.

As Jim continued to progress and we got to know the staff better, their education and training in head trauma became more evident. Educating me was part of their program. I asked for all the reading material they could give me on cognitive therapy.

I longed for a book by someone who had survived what I was going through. I wanted to know somebody had been as mixed up as Jim was in California and still returned to a normal life. I wanted to know what it took for recovery. But the staff at Montebello had no such book.

In reading the guidebook put out by the Maryland Head Injury Foundation, I discovered Jim's progress had been very typical.

One of the ways to document recovery from a coma is to use the Rancho Los Amigos levels of cognitive functioning scale. Originally developed by the professional staff at the Rancho Los Amigos Hospital in Downey, California, the scale was the result of a major federally funded research project and is used by professionals to communicate consistently with other health care professionals about a patient.

The levels of response are:

Level I: No response

The patient appears to be in a deep sleep and does not respond to voice, sounds, light, or touch.

Level II: Generalized response

The patient begins to move around; however, those movements are not for a specific purpose and are not consistent.

Level III: Localized response

The patient begins to move his or her eyes to look at specific people or objects. At times the patient may turn his or her head in the direction of a sound or a voice. Simple directions (such as “wiggle your toes”) may be followed. The patient is becoming more aware of his or her body and discomfort and may try to pull at tubes.

Level IV: Confused-agitated

The patient is agitated and confused about where he or she is and what is happening. The patient may be very restless, verbally abusive, and/or aggressive and may cry out. Agitation results from the patient’s inability to understand everything that is going on. The patient may talk but generally the information does not make sense.

Level V: Confused, inappropriate nonagitated

The patient is confused and may not make sense when talking. The patient does not know where he or she is or what is happening. The patient is less agitated but may become agitated at times for a specific reason. Memory of some things from before the accident may return but not of recent things since the accident. The patient is able to follow simple directions most of the time.

Level VI: Confused-appropriate

The patient is now making more sense when talking. Simple daily activities (such as brushing teeth) can be

accomplished but with help in knowing what to do and when to do it. It may be hard to learn new things, and remembering recent events is still difficult.

Level VII: Automatic-appropriate

The patient makes sense and can do many daily activities without help. For safety purposes, the patient needs to be watched at all times. The patient still may have some difficulty remembering things that were said or done that day or recently and may have problems thinking things out, solving everyday problems, and judging situations. The patient may not realize that any problems exist.

Level VIII: Purposeful and appropriate

The patient is now independent with daily activities and learns new things. Abilities include remembering recent events, thinking things out, and solving problems. The patient may still have some mild difficulties but is more independent in finding solutions.

The exciting thing about finding the scale was discovering that Jim had already been through most of the stages in a relatively short time. Knowing from the beginning all the stages he had to go through would have been helpful so I could have recognized them as being normal.

As I read the literature on head trauma, I wondered how I could have been so naive. In the movies, someone gets knocked out, makes no response for a long time, and then miraculously wakes up and is O.K. I now know that happens only in “reel” life.

I tried to push the term head trauma out of my mind. That sign above the door, “Head Trauma Unit—#1 in Maryland” still bothered me so I always took the back way into Jim’s unit. My natural instincts, though, pushed me to find out everything I could about the problem.

I came to understand that a head injury is like no other injury to the body because every

breath, every motion, every idea, every feeling and every sensory perception at some point requires a signal in the brain. If the pathway in the brain which that signal must traverse is interrupted by injury or a chemical imbalance, it comes out wrong.

I finally came to view the brain as a master computer, although infinitely more complex than any devised by man, and in using that simile, I came to understand the difficulties Jim and I faced in his recovery.

Just sitting in a chair requires my mind's computer to be operating. Is my head held up straight? A signal is constantly telling my brain the answer to that question. That signal in Jim's brain had been disturbed and resulted in what I had called "the headless Jim Marsh." This had since healed.

Who does this hand in my lap belong to? That may seem like a crazy question, but knowing what a hand is and recognizing it as my own are two separate functions in my brain. If one of them is injured, such as in a stroke, there can be problems. It is said that when President Wilson had his stroke, he woke up and wondered whose leg was in his bed. It was his own.

Who am I? Where am I? What day is it? My brain knows and must hold this information somewhere in storage ready for me to call upon it while I am sitting in that chair. It is a separate function of the brain to retrieve that information, and sometimes the brain gets fouled up doing it.

I began to understand there are programs in a brain for transferring information to long-term memory and for calling information up from the same long-term memory. To do that, the brain has to have some way to organize that information.

The brain has a program for holding bits of information in what is called working memory. Some of us can hold a great many bits of information in working memory to use while we are making decisions. As a bridge player, I

could remember most of the fifty-two cards as they were played. Head trauma can limit the number of things a brain can hold in working memory.

I learned there are hundreds of functions in a brain, and any one of them can be disturbed in head trauma.

As I came to learn more about the brain, I realized that many times differences in people are related to a difference in the computer in their brains. I know people whose brains have excellent "Spell Check" programs and others who lack that option. Our son has a super-speed math coprocessor in his brain. Mine came with good long-term storage of what people tell me about themselves, but a loose wire in the section directing me to say the word I mean. I came to understand that every brain is damaged in some way. Certain parts in each one are prone to malfunctions.

In a head injury, a person's central processing unit has been damaged. Unlike a computer, the processor cannot be taken out and replaced with a new one nor can an extra unit be wired up to add processing power. Any fixing up must come about as part of the natural healing process or by manipulating the input to the brain so as to stimulate lost abilities or to cause the brain to forge new pathways. If none of that works, then some compensatory techniques can be learned to help the brain function.

According to the Maryland Head Injury Foundation, "for all patients surviving 6 hours or more of coma, over half will return to school, jobs, and independent living by 1 year after injury, although many will have some residual cognitive problems." Reading that in the early stages of Jim's recovery made me shudder. If just over half return to jobs, that leaves a large percentage who do not.

The literature kept repeating that the prognosis for a child with a head injury is considerably better than that for an adult.

After my study, the therapy programs took on greater importance. In any head trauma

unit the programs are basically divided into three types: physical, occupational, and speech.

Jim needed physical therapy because of the injury to his leg and the general loss of muscle tone from inactivity. His head injury left some problems with balance, gait, and range of motion.

Occupational therapy is more concerned with everyday living techniques that get disturbed by head trauma. For example, doing things in the proper sequence can be a problem if a person's central processing unit has been disturbed by head trauma. The preparation of a meal involves sequential tasks, so an occupational therapist might help a patient prepare a meal. Other functions that might be disturbed following head trauma are the ability to write a check, read a road map, or go shopping. Luckily, Jim's ability to function in these ways was not seriously disturbed. In a life skills test he scored in the 98th percentile.

Because movement of the hands and arms are very necessary in life skills, the occupational therapist is concerned with that range of motion. Jim did not have certain movements in his arms and shoulders, so each day he worked improving them.

The occupational therapy program also worked in some ways with attention span problems and memory. Several computer games were used for these. One day his therapist gave Jim several multiplication problems to solve. I was thrilled to find Jim could still do them; however, the therapist was concerned his attention span was so short.

Speech therapy deals with more than the sounds we use to communicate. The formation of speech involves organizing our thoughts, finding the right word for what we want to say, and voicing it correctly. It also involves the receiving of speech, processing the information received, and transferring that to long-term memory. All these things get disturbed in head trauma.

It was obvious in California that Jim's speech processing function was disturbed when he called everything a "bear." Other speech functions were impaired, but it took me longer to recognize that.

Rehabilitation is hard work, particularly rehabilitation from head trauma. Jim's body had suffered a major physical trauma and he had been through two surgeries. In addition, one of the side effects of head trauma is mental fatigue because the brain requires more energy to function following trauma. In the early days, someone suffering from head trauma wants to sleep a lot. Yet the theory behind rehabilitation is that pushing the body and mind a little more each day will strengthen them and help them recover.

The program at Montebello was intense. An example of Jim's journal for a day reads:

6/27/89 9:00 - 10:00 O.T.

(Occupational Therapy)

1. Exercised arms (range of motion)
2. Computer game - logic

6/27/89 10:00 - 10:30 P.T.

(Physical Therapy)

1. On back - knee exercises
2. Back arches and lifted legs
3. Knee exercises over wedge

6/27/89 11:00 - 11:30 - Speech

Discussion of test results:

Analogies - good

Deductive reasoning - good

Missing premises - weaker

Scientific brain - coming back

Analyzing info - good

Time frame - needs improvement

Sequencing - bad

Overall - very good

Several were in the 98 %tile

6/27/89 11:30 - 12:00 Cognitive group
1. create bulletin board - brain injuries

6/27/89 - 1:00 - 1:30 Speech canceled
6/27/89 - 1:30 - 2:00 O.T.

1. Written paper test
2. Logic computer game
(up to 7)

6/27/89 2:00 - 3:00 P.T.

1. Wall exercises no wt.
2. Crossed steps then rotated
3. Trampoline
4. Leg muscles w/wts on stomach
5. Kicked ball
6. Walking - push off - not on heels

6/27/89 4:00 - 4:30 Psycho-social group
1. Discussed Thurs. outing

It is no wonder that in the late afternoon I usually found Jim asleep in his bed.

During a weekend visit home in June, Jim discovered the police report from Pasadena. My sister-in-law Sylvia, who is a genealogist and believes in keeping complete records on every event, urged me to get a copy of the report before I left California. She told me I did not need to read it and offered to put it in her lock box in a sealed envelope if I wanted her to.

I made a second trek to the Pasadena Police Station the week before I left Pasadena. Maria, my social worker there, suggested that if I wanted to read the report I bring it in so I would have someone to talk to about it. I decided I would put it in an envelope and take it home.

At home, when I knew my friend Peggy would be nearby if I got upset, I read it. I should not have worried. In my job for a firm that does background investigations for federal job applicants, I had seen many police reports and understood their language.

The report cited the time and place, the condition of the room, and the reasons why no foul play was suspected. The investigating

officer had interviewed the maintenance man who had found Jim and two others. There was no doubt Jim cut his wrist and jumped.

I had stashed many of the things from Pasadena in a box in our bedroom until I had a chance to sort through them. There, unbeknownst to me, Jim found the report.

His memory of the event was blank, but the police report left no room for questioning. "I guess I really did it, didn't I?" he asked.

"Yes," I responded, "there is no doubt about it."

At times, it was hard for Jim to speak openly about his suicide attempt if people asked, but from then on he could not deny the events were as I had told him from the beginning. That realization was important in terms of recovery because it takes mental energy to deny something—mental energy which Jim could direct toward getting well.

In June Jim's colleagues sensed his recovery and became excited about the prospect of his return to work. One colleague called to see if he could come for lunch. I insisted he check with Barbara, Jim's nurse, before doing so. I did not want Jim overly tired. Barbara thought lunch was an excellent idea and made arrangements for it. The idea caught on with other colleagues, and Jim's weekly business luncheons added a creative and enjoyable dimension to his rehabilitation as well as a return to normalcy.

As the month of June progressed the staff at Montebello increased Jim's independence in little ways. When he could bear full weight on his leg, the wheelchair was taken away. After the physical therapist was convinced his balance was fine, the walker was taken away.

Each morning Jim was given the tray with his medicine, and he set out his proper dosage—one thyroid pill and two asulfadine tablets for his colitis. Barbara checked before he took them.

He became concerned about my traveling 124 miles round trip to visit. "You

don't need to come every day," he insisted. "I'll be fine." Some weeks I took him back on Sunday evening, and since I could stay Friday evenings with Bruce and Judy Marsh and get an early start on Saturday, I would not return to Montebello until Friday. Should he happen to run out of clean clothes during the week, there was a washer and dryer on the unit he could use. Once he even did.

The final measure of his independence came in late June. When Jim went to bed at night, the sides of his bed had been pulled up, and he was given a urinal to use. That stopped when he was deemed capable of making a trek down the hall at 4:00 A.M.

Like anyone who has dealt with a long-term hospitalization, we longed to go home. Montebello originally scheduled a release date of August 3, much too far away for our liking.

Dr. Kelly, the neuropsychologist, told us that as long as each of the therapies reported work yet to be done and progress being made, the staff recommended staying in the hospital. His remaining in the hospital then was both encouraging and discouraging—encouraging because Jim was continuing to make progress and the therapists thought they could help, discouraging because we wanted him back to normal. Finally we were given a release date of July 18, and follow-up therapy had to be pursued.

As I learned about the cognitive disturbances caused by head trauma, I realized Jim's return to work must be a very controlled process if he were to succeed. I came to respect the healing process as our ally but only if we followed its timetable and its idiosyncrasies.

"Jim, you are going to have to listen to me when you go back to work," I lectured him. "If you go back to work and try to work on everything at once, you might get several phone calls in a morning on totally different subjects. You have difficulty switching gears and recalling the right information, and you could make a lot of mistakes. Too many wrong answers and people are going to distrust you."

"Phyllis, you have gotten me this far so I will do what you tell me," he responded.

"You need to take the simplest project you are involved in, review it completely, and find out what has happened on it this year. After you are comfortable with that, you can take the next easiest one," I explained.

After realizing his return to work must be well structured, I was thrilled to learn there were vocational rehabilitation therapists trained to guide us in the process. I told Jim we would borrow money to pay for this service if our health insurance did not cover it.

In recent years new community programs have begun providing therapy and guidance for victims of head trauma who are released from rehabilitation hospitals but need further therapy to return to work or independent living. For many years such people went home and stopped recovering.

One such program had started near our home, and I visited the facility full of appreciation for the lifeline they were extending. The program was housed in a private home that had been converted into living facilities for eight clients. It also accepted day patients. The beautiful woodland setting soothed me as I drove up.

The director spent some time talking with me. As I explained my hopes for Jim and how I had already told Jim the way I felt he should return to work, the director jokingly offered me a job as a vocational counselor.

"What does your husband do?" he asked.

"He's a high level geophysicist," I responded.

"Well, it's doubtful he will return to such a high level following an injury," he counseled.

There were many reasons why I chose to go elsewhere, one being that most of the clients in this facility were much younger than Jim was, but the director's comments were my most lasting impression. He had been involved in head trauma rehabilitation for about twenty-

five years and had seen many clients who did not return to previous levels of accomplishments. I know he was trying to help me be realistic, but his comments sent me into despair for several days.

“Am I wrong,” I asked myself, “to think Jim will go back to his job? Remember, the director is an expert in the field and should know what he is talking about.”

Finally, the corollary to the Phyllis Marsh rule of survival took over. “Remember, he has never examined Jim or seen Jim’s records. He does not know you or your strengths,” I told myself. “Therefore, he cannot predict what will happen to Jim. Listen to the expert in his field but only after he has examined Jim and knows you.”

While working through my despair, I was introduced by the social worker at Montebello to Community Rehabilitation Services of Annapolis. Diane, their representative who introduced me to the program, spoke with pride about the staff and clients. She offered us help but did not promise recovery. More importantly, at no time did she talk of limits. That was all I could ask of any program and arranged for Jim to enter it.

I look back on the final days at Montebello with fondness. Many of Jim’s colleagues were taking him out to lunch or visiting him in the evening. Everyone was excited at his progress. It was interesting to me that friends and colleagues talked to Jim about their bouts with depression thinking Jim would be able to help them. They did not realize I was the one who was open about his suicide attempt at a time when Jim was in a coma.

Old patterns emerged. Some came to reassure Jim and tell him that they wanted him back but then quickly started talking about their own problems because in the past Jim had been the listener.

Jim realized his mind was not back to normal, and he sometimes worried about the visitors running tests on him. “Don’t worry,” I

counseled him. “Everyone is running a test on your long-term memory and that was not affected by the injury. You will pass all their tests.”

One colleague called me after a long phone conversation with Jim about the work they were doing. “He understood everything! I have no doubt Jim will be back to work, and that is really exciting news for all of us.”

I rejoiced in his judgment but responded, “Just remember there is still a clinical question about whether Jim can return.” How could I explain Jim might not remember the conversation the next day.

By this time I accepted Jim’s head injury. I entered his unit the front way and appreciated the sign that read “Head Trauma Unit—#1 in Maryland”. I could name and thereby acknowledge the problem we had to solve, and I rejoiced I had chosen Montebello.

Saying goodbye was a happy-sad event. We were relieved when Dr. Drubach kept Jim on as a patient. We had someone to call in an emergency.

Many of the nurses hugged Jim. He had become a model patient, working harder than almost anybody they had seen, and his success was what their careers were all about.

HOME FOR GOOD

Jim's coming home required adjustments. By mid-July I was taking him back on Sunday evening, visiting him for a couple of hours on Wednesday, and returning Saturday morning to pick him up for the weekend. The rest of the time I was free to read, to clean house, to shop, to watch TV or whatever. For five months I had made all decisions concerning our household. Now there would be one more person whose feelings had to be respected.

Jim had five days of rest at home before he was scheduled to begin his therapy in Annapolis—five days to walk around the yard, look at all his tools, and take lots of naps.

"Look, Jim," I lectured, "the worst thing you can do is go home and sit. To recover you need the stimulation of people. You need to push yourself." He was willing to listen, and we went out to eat one evening and visited friends.

On the following Monday we drove the thirty-one miles to Annapolis to the offices of Community Rehab. Dr. Jeanne Fryer, program director for Community Rehab, helped pioneer the concept of community rehabilitation programs for people with head trauma and is well known in the field. Her open friendly manner eased Jim's entry.

Dr. Fryer introduced us to Brian Bemis, the speech therapist who had come to Community Rehab the week before from the Shock Trauma Unit at the University of Maryland Hospital and would be Jim's case manager.

"Tell me a little about yourself," he said to Jim. "What do you notice that is different?"

Jim had difficulty organizing his thoughts. At one point he turned to me and said, "You tell him."

"No," I responded, "he wants to hear what you have to say, and then he will ask me."

In running that evaluation, Brian was listening for many things that still needed working on following head trauma.

"Here is what I notice," he said. "First, I hear a bit of slowness in your speech. Do you notice that?"

Jim nodded in response.

"Secondly, as I watch you, I don't see a whole lot of expression in your face. I think that has probably been changed by the injury. I am also hearing some difficulty in organizing your thoughts so they come out right. Do you know what I mean?"

Jim nodded in response.

"All of these are things I can help you with, and they are all very common following head trauma." Brian's manner was very supportive of Jim and the problems he was experiencing. "As you get stronger and after we have worked on these problems, we will look at your work situation and see if we can help with that. Also, at some time, I might try some stressing situations to see how you might handle them because managing stress is often a problem."

Next, we met with the occupational therapist. Jim needed less of this kind of therapy, but the staff decided there were some decision-making skills they could begin with.

The physical therapist did not meet with us that first day.

Jim's program for therapy was set up for Monday, Tuesday, and Thursday mornings from 9:00 to 12:00. Since Jim did not drive, I would chauffeur him.

I had not realized while Jim was at Montebello that his being able to walk down the hall to therapy and then walk back to take a nap had saved so much on his energy level. Nor did I realize how much energy it takes just to live in

your home. Now he taxed himself further, getting up in the morning, getting dressed, riding thirty miles to Annapolis in morning traffic, going through three hours of intense cognitive and physical therapy, stopping somewhere for lunch, and coming back home. Usually, Jim would fall asleep in the car or take a nap immediately upon our return home.

The fatigue presented itself in many ways. "Phyllis," he told me, "I don't have any interest in anything. What am I going to do about that?"

"Jim," I suggested, as did a therapist later on, "that will come. I think you are going to have to pretend an interest in something at first and let it hook into you."

"But I'm not that kind of person," he responded.

Our car developed a strange noise. Since it first occurred when we placed a tractor part in the trunk, I thought it probably came from something knocking in the trunk, but it was still there when we unloaded the part.

"Mathew needs to look at this. It sounds like it's coming from the motor," Jim said.

Mathew was free when we were away. He slept in on Sunday mornings while we were at church, and then was gone when we got home.

"Damn that Mathew," Jim said. "He doesn't care."

Mathew promised to drive the car one Sunday afternoon, but on our way to church the noise stopped. Coming home we drove down Route 301 running the car at high speed since we usually heard the sound above forty miles per hour. We could not find the noise.

At home I told Mathew the noise had stopped. "Why isn't Mathew going to take the car out? Doesn't he care?" Jim demanded.

I did not answer. I wondered how Mathew was supposed to find out what was causing a phantom noise. Later, by moving things around in the trunk, I discovered the noise was caused by a tire-changing tool that rattled against the floor of the trunk when it got shifted

to certain positions. My husband, who had rebuilt entire cars, had been stymied by the sound.

Mathew bore the biggest burden for Jim's fatigue. Whatever Mathew did, Jim felt he should have done the opposite. If Mathew turned left, he should have turned right, and if he had turned right, I felt Jim would have said he should have turned left.

A typical episode occurred when the hook on the spring in our garage door broke. Jim wanted Mathew to add a new hook to the old spring. Mathew felt that after twelve years of use metal fatigue had caused the spring to break.

Jim blew up at being challenged on the issue. "Don't give me any guff on it," he yelled. "Let's just fix it."

"It's dangerous, Dad," Mathew responded. "It could break anytime again. Call and find where you can get a new one, and I'll put it on."

"That's too expensive," said Jim. "If you don't want to help me, I'll fix it myself." He really was not capable of doing so.

After several phone calls, I located a source for the spring, and Jim and I, both exhausted, went to pick it up.

"This is really unnecessary," Jim said on the way. "If Mathew would just listen, we could have fixed it, but he won't, dammit." I felt Mathew was right.

After putting the new spring on, Mathew adjusted the one on the other side of the door to match. Shortly, we heard a loud clang from the garage, and the door would not go up. The opposite old spring had snapped.

"Goddam that Mathew. He won't listen to anything," Jim shouted. "He tightened that spring too much. I told him what to do, but he thinks he knows everything. Goddam him." Listening and watching Jim try to express his anger was a little like watching a movie in which the reel is moving too slowly. His fist touched rather than hit the table, his words were a whine.

Mathew listened to himself being cussed and left hurt and angry.

Several things were out of kilter. Jim could only concentrate on the spring. He had no energy to focus on the safety factor nor did he have the cognitive ability to hold the safety factor in his working memory as a consideration when he solved the problem. He was unable to recognize that Mathew was concerned about him. Only later he realized the way in which Mathew had adjusted the spring had had nothing to do with the other one breaking. He felt no responsibility for Mathew's feelings.

I spent the night on the sofa in tears. My husband could not handle an everyday problem. The authority and care Jim Marsh used to have were nonexistent in the impaired man pounding his fist on our dining room table. Mathew had looked after us and now felt unappreciated and deeply hurt. I was afraid he would move out in anger and miss the opportunity to finish college.

Mathew and I talked the next morning. "Mom, I could have been killed when that spring broke, and Dad didn't even care."

"I know, Mathew, and that is why what we are dealing with is so awful." I could not keep back the tears nor did I try. "Mathew, whatever you decide," I counseled, "please keep on going to college. Your future is still important to me, and I hope you will get your degree. I'll try to help in any way possible."

"Mom," he responded, "my first priority is to go to college. I am not thinking of dropping out, but I can't study if I am going to be put down and yelled at all the time."

"I know, Mathew."

"But, Mom," the tears welled in his eyes as he spoke, "if I move out, then you won't have anybody to help you around here."

"Well, Mathew, I'll get along somehow."

Mathew confronted his bottom line like I had confronted mine when I had the conversation with myself about my anger. We both agreed college was his priority, and there was no reason to postpone it.

He decided to stay, and we discussed the way in which Jim's fatigue led to problems. By Friday night, we could depend on Jim's being so tired he would blow up at Mathew, and Mathew, with my support, started planning to be away Friday evening as much as possible. By the time Jim rested up over a weekend, things were tolerable until the following one.

The ride over to Community Rehab each morning was a good gauge of Jim's fatigue. On Monday we would talk about the people we had seen on the weekend or what we were going to do about our new roof. By Tuesday, half of the trip would be taken up by Jim's complaining that Mathew wouldn't listen, was going to throw his life away, and did not care about anybody but himself. By Thursday, the entire trip would be a tirade against young people.

"Jim," I would say, "I think you are tired."

"No, I'm not. I just see things more clearly than you do."

"Jim, Mathew is twenty years old, and it is time for him to get out and experience the world. Remember, when you were in a coma, he came through. All our friends told me how helpful he was when they called about information. He came to Montebello to see you so I could have a break, and he kept our cars fixed."

"Well, I just don't see it."

At that point in Jim's recovery, one of his cognitive problems was putting things in long-term memory, particularly verbal messages. It was probably impossible for Jim to upgrade his computer and store in his memory the things I told him that Mathew had done and call them back up when a judgment was needed. His fatigue only complicated the process. And we as a family had to cope.

The fatigue problem was a major concern for Rick, the physical therapist at Community Rehab. He felt that many programs dealt with the cognitive problems following head trauma and went to great pains to identify the

areas that needed working on while forgetting that fatigue alone can cause overwhelming difficulties.

He started Jim on a program of exercises to develop the muscles weakened by the injury and in early August started taking Jim to a health and fitness club in Annapolis. There Jim was introduced to Nautilus machines specifically designed to work different muscle groups as well as build up physical stamina. Twice a week Jim would spend over an hour going through the program under Rick's guidance. It included riding a stationary bicycle for aerobic fitness as well as using the Nautilus machines. I could see the progress Jim made in physical stamina, and Jim could feel himself getting stronger.

Jim later told me that at first it seemed like he was carrying a two-hundred-pound weight on his shoulder when he tried to walk around. As he progressed through Rick's program, he felt as if he was throwing off bricks.

If exercise increases an uninjured person's ability to think, it certainly should have the same function in a person suffering head trauma. Jim's improvement while going through Rick's program affirmed that.

After dropping Jim off at Community Rehab each day, I needed something to do. Annapolis is a beautiful city in many ways. The gleaming white yachts and tall sailboat masts in the harbor hint at faraway places and weekend getaways in protected coves. Specialty shops on the main street carry unique but expensive home furnishings and gifts. The local mall is a popular place for professionals to shop for career clothes.

All that seemed far removed from the world of head trauma. Listening to two silk-bloused matrons discuss whether to purchase a wedgewood blue or dusty rose flower-embroidered towel set while I hesitated buying a summer blouse at half off the sale price, I wondered if the color of our bathroom towels would ever matter again.

Seeking refuge, I found the public library. There, in a room with ceiling-high windows framing a shaded nook, I made my own world among the magazines and books and managed to survive one more step toward recovery.

RE-ENTRY

On the way to Annapolis in mid-August, Jim said, "I keep forgetting to tell Brian something. He gave me a test the other day, and he said he was going to give me three words that he would ask me later to see if I remembered them. He never asked me what they were."

"What were they?" I asked.

"They're easy to remember—rose, hamburger, and sweater."

"Well, be sure to tell him because I think he'll be surprised," I said.

Brian was excited. "I have no doubt now that Jim will return to work."

Why would remembering rose, hamburger, and sweater be so significant for a man who used to be invited to present papers on satellite geodesy at international meetings? It signaled the return of several cognitive functions.

First, it showed Jim's ability to process verbal information. All of us get our information either verbally or visually. These are two different processes in our brain. Secondly, when the brain receives such information, the brain holds it in what the psychologists refer to as working memory long enough for the brain to act upon it. Then the brain transfers to long-term memory the information it wants to keep. Head trauma causes disruption of this process.

Jim showed the ability to receive information verbally, hold it in working memory, as well as transfer it to long-term memory. If Jim returned to work, he would be able to sit in a meeting, take part in the discussion by holding information in his working memory, and then incorporate what was going on into the store of information in his mind.

None of this had anything to do with his ability to understand scientific calculations or remember the work he had done in the past. At

stake was his ability to contribute new work to the scientific field.

By late August it was time for Jim to start the process of returning to work. Brian guided us each step of the way. In order for him to understand what Jim would encounter on his return, Brian suggested meeting in Jim's office. Brian also suggested it would be helpful if one of Jim's colleagues could act as a mentor to help identify problem areas. Jim and I readily proposed Chet.

Jim first returned to work on a Friday afternoon in late August. Jim, Brian, and Chet spent some time in Jim's office talking about his return. Then we went to a conference room where Jim's colleagues had a reception for him. Jim stood at one end of the room, looking rested and healthy, more so than many of his colleagues who attended. He stood the entire time to show how much stamina he had. Across the room, Chet chatted with Brian, who watched Jim to see if any problems developed.

It was a celebration!

For the two hours or so we were there, Jim seemed a healthy man. Many colleagues and supervisors came to welcome him back. But those two hours taxed him to the limit. It still took a great deal of energy for his brain to operate, and had he tried to do more, he would have made significant errors.

Brian's plan for Jim's re-entry was simple yet profound. He suggested Jim select a research project he could have some input in. Jim would lecture Brian on the content of the project as part of his therapy, and then a meeting would be set up for Jim to take part in the discussion while Brian watched.

The project selected was a research paper written by a graduate student at the University

of Colorado. Jim had helped arrange a research grant for the student and was involved in guiding the research. The student needed to make a decision about further projects.

Jim lectured Brian during four different sessions. The lectures had a more important function than just imparting information to Brian. Following head trauma, organizing information to present to others is impaired. Sometimes too much information is included; at other times, a head trauma victim may have difficulty identifying the main point. Giving speeches was a big part of Jim's job, and if these cognitive functions had been impaired, there would have to be therapy to improve them.

It is also difficult for head trauma victims to switch to another subject and remember to come back to the first one. Brian asked questions to get Jim off the track to see if he could get back on.

A luncheon meeting was scheduled at our house for the group, consisting of Brian, Jim, Chet, the graduate student, and another co-worker. Jim would not be overtired from traveling and would be in familiar surroundings for the meeting.

Group discussions present a different set of problems for someone who has had head trauma. Dealing one on one with another person is easy because we can concentrate on one thing. In a group discussion, there is more stimulation. Sometimes more than one person is talking. Each member of the group has his own agenda we have to pick up on. Sometimes one person goes off on a tangent that disrupts the flow of information. For a victim of head trauma, the extra energy required for processing all that information is exhausting. If the process of keeping bits of information in working memory has been impaired in the trauma, a meeting can be overwhelming.

The meeting went very well. Brian felt Jim had been a very active participant and contributed well to the overall project.

The next phase of his return to work needed to be planned.

Dr. Drubach, the neuropsychiatrist who was Jim's primary doctor, emphasized, "Stress, but don't overstress." Each new step should forge new boundaries in his recovery but not go so far as to overwhelm the healing process.

"When you start," he counseled us, "work only a few minutes a day, and then gradually increase it."

A meeting at our house required one level of stamina, a day at the office would require a different one. In September Jim was not ready to go in to work because he was still going three days a week to Annapolis for therapy. Starting back to work then consisted of catching up on all the mail that had come into the office in the previous six months and speaking by phone with many of his colleagues.

Since life cannot be all work and rehabilitation, we continued reaching out to our friends and looked for some recreation. We attended church, and one Saturday night went to a wedding in Baltimore. Colleagues invited us for dinner.

One family adopted us as members. At a crab feast with them in August the question of prayer came up. I told the people around me a therapist had suggested a study be done to determine the factors that led to Jim's remarkable recovery. One of the young men immediately said, "Prayer. They wouldn't count prayer, would they?"

The question nagged me. Did prayer make a difference?

I admit to certain difficulties in understanding prayer. The problems I dealt with at times seemed impossible. My geophysicist husband sometimes reminded me of my Down's syndrome brother. Was it possible an all-powerful God was waiting for some kind of prayer before deciding whether to heal Jim or leave me with a second Duane? What if I could not find enough people to pray? If I were going

to have to go through this situation, I wanted a God who knew what He or She was planning from the very beginning!

All I resolved as an answer was that Jim had a lot of prayers offered for him, and the expression of caring implicit in those prayers had touched us deeply.

In the meantime, Community Rehab in Annapolis brought Dr. William E. O'Donnell on staff. He is a clinical neuropsychologist and continues doing research into brain healing as well as working with clients. He wanted to do some neuropsychological tests on Jim to determine the extent of his progress and to map where further therapy should be done.

The tests took six hours to complete, three hours on two different mornings. I told Jim just the fact he was able to last for six hours said a lot about the extent of his healing. Many head trauma victims would have walked out in a huff much earlier. Dr. O'Donnell later agreed with my conclusion.

Part of the test was a standard IQ test called the Wechsler Adult Intelligence Scale - Revised. Eleven different components measure such things as vocabulary, arithmetic, picture completion, and object assembly, and produce a number based upon how well Jim did compared to what is considered the general population. That number is called an IQ score.

In March Jim had scored 70 on the tests given to him in California. In June at Montebello he had scored 103. In September, Jim scored a verbal IQ of 135 and a performance IQ of 107. Once again, the slowness of his cognitive processing, though it had improved since June, brought his score down on the performance part of the test. His overall IQ based on this test was scored at 126.

"Jim, don't worry about IQ," I told him. "The school places kids with IQs of 130 in the talented and gifted classes, and yours is almost that already. Besides, the literature on head trauma says that speed of processing continues improving long after other healing has stopped

so that is still going to get better." I rejoiced in this report because it was a major boost to my feeling that Jim would be fine in the long run.

Dr. O'Donnell also did tests of memory functioning—both verbal and visual—and again Jim scored in the above average to excellent range. Clearly, a lot of healing had taken place.

However, there were problem areas that needed working on. Jim's performance in inductive reasoning or "concept formation requiring hypothesis testing and formulation" was poor. He seemed to draw a blank as he attempted this test.

Tests that required longer attention and concentration presented some difficulty, but this is common following head trauma. A test of Jim's ability to shift between two conceptual domains (letters vs. numbers) proved difficult for him, primarily because of the slowness of his cognitive processing. Tests of his ability to devise strategies for problem resolution also showed some impairment, again because of slowness and the need for attention and concentration that is injured in head trauma.

Projective and personality tests showed Jim had a clear appreciation for the nature and extent of his cognitive difficulties. This was an important component of his continuing work toward recovery.

There were no signs of any psychiatric or organic personality disorders, and there were no suicidal tendencies.

Dr. O'Donnell was very encouraging. "Remember," he said, "we are very early in the healing process for head trauma. The healing will continue for a long time."

He went on to explain that many of the problem areas were in what is called "the higher level" mental functions. In head trauma, these functions are usually the last to return. He told us of a client who had suffered a severe head injury in his late teens. "His sense of humor, which is a really high level mental function, came back after seven years. That means his brain was still healing then.

"You have healed much more rapidly than could have been expected from the seriousness of your injury," he said to Jim. "That fact makes prospects for your long-term recovery very encouraging."

I would hear these words from Dr. O'Donnell many times, and they became my life support. "Remember," I would tell myself, "Dr. O'Donnell says the healing will continue for a long time. What is happening today may improve as Jim's healing continues."

When Steve returned from Pasadena in February and sat down with Jim's colleagues to plan for Jim's return, he set October 1 as the target date. October 1 came, and Jim still was not ready for return full time. Lack of stamina was one problem. Driving was another.

During September, Jim had returned to the office on occasion for meetings with out-of-town scientists and his supervisor. Some days he rode in with Mathew, and I picked him up in early afternoon. I was ready to toss my chauffeur's hat.

The State of Maryland requires that anyone who has been unconscious for any length of time, even momentarily, for whatever reason, must notify the Medical Advisory Board of the Motor Vehicle Administration. An evaluation is then done by the board to determine whether that person can retain his or her license.

When Jim left Montebello, we forwarded a letter to the board, and Dr. Drubach provided a medical statement to them. Jim eventually had to appear before the board for a final evaluation as to whether he could retain his license.

Before he could return to driving, it was recommended that Jim undergo a driving evaluation by someone specifically certified by the State of Maryland to test driving function following injury. We felt this was important because we recognized that if Jim were in an accident, even if it were not his fault, the other party might claim Jim was at fault because of

his head injury. An evaluation would provide us legal protection.

Driving involves a whole set of cognitive functions that can be impaired by trauma. A big one is depth perception. We need to know as we drive along whether we are ten feet or ten yards from the car in front of us.

Sometimes people with head trauma cannot look at a situation and recognize that something is out of place. If a tire rolls out on the road in front of us, a complex process tells us to avoid it, and head trauma can disrupt that process.

People who have suffered head trauma also have slowed reflexes partly because the speed of cognitive processing is slowed.

Jim had already returned to mowing the lawn using our riding lawn mower, and there was no evidence he was having any difficulty judging turns or distances. None of the tests at Community Rehab indicated he would encounter difficulties in driving. It was time for an evaluation.

On October 10, John Arthur of the Maryland Rehabilitation Center in Baltimore conducted the three-hour evaluation. Mr. Arthur teaches driver education at the rehabilitation center to people with all kinds of injuries to enable them to return to independent living.

For reflex testing, Jim sat in front of a machine with a red and green light. On the floor was a brake pedal. The light stayed green for varying lengths of time and then turned red. The machine registered the time elapsed between the change to red and Jim's hitting the brake. An average of twenty-five times determined his final score. He did well.

Mr. Arthur also did an eye exam to determine Jim's peripheral vision and depth perception.

An occupational therapist then gave Jim a series of tests requiring interpretation of what was happening in a sequence of pictures.

Experience has shown that difficulties on these tests lead to difficulties in driving. Jim did well.

Finally Jim drove Mr. Arthur through Baltimore on a twelve-mile test designed to cover almost every driving situation—heavy traffic, residential areas, stop signs and stop lights, entrance and exit on to a freeway. The test took forty-five minutes, and Jim did well.

With proof in hand of his ability to drive, Jim could now take the final step toward independence—he could get in the car and go somewhere whenever he chose. How much we had taken that freedom for granted before he was injured. With Jim's driving to work, I was free to spend the day doing what I wanted. How much I loved that freedom!

Jim's return to work still had to be gradual. He could function well for a short time, but because his cognitive processing took so much energy, he tired quickly.

In mid-October, he went off full-time sick leave and started going to work three days a week. He continued therapy at Annapolis on Thursdays and had Tuesdays free to rest.

Jim felt awkward about returning to work. "I look normal, and they are going to think I'm faking it when I can't do everything I did before," he said. "I know I'm not fully healed."

The expectations and knowledge of his supervisors and co-workers then became an important part of Jim's rehabilitation. Statistics show that younger workers are more successful at reentering the work place following head trauma than older ones. Some of the statistics suggest this difference may be because employers are more willing to make allowances for the difficulties encountered in the return of younger workers because they have a longer potential in the work place.

If Jim were involved in a conversation about work that involved several people, he could follow along and contribute well for a short time, and then fatigue would take over.

A common problem following head

trauma is called initiation, one of the higher level functions in the brain that psychologists call "executive functions." A person with head trauma might know how to get up, get dressed, fix breakfast, and go to work. However, if the initiation function has been disturbed, that person might not be able to start the process.

Jim showed some problems with initiation when he first returned to work and a lot of problems with stamina. There were possibilities that colleagues, who were used to Jim's contributing actively, might think Jim was uninterested in the work. Without an understanding of head trauma, they might think Jim would never be the same. In that case, they might ignore and exclude him. Since his ability to initiate contact had been injured, he would have great difficulty overcoming their exclusion.

Education in head trauma provided the solution. By this time, I had perceived that some of Jim's colleagues felt I was protecting him. I was, but I knew what was going on. I could have gone to Jim's colleagues and quoted Dr. O'Donnell about his healing continuing for years, but that would have looked like I was still protecting Jim and not accomplished any purpose.

I wanted at least one person at work to know from an expert what was going on so that when conversations among colleagues centered on Jim, that person would be able to say, "Remember, the healing will continue for a long time. Jim can still be O.K."

Again, I thought of Chet, who had been so good in the months just past. I pushed for a meeting between Chet and Dr. O'Donnell. Jim also wanted to include Dr. Jeanne Fryer.

After studying cognitive processing for eight months, I pictured the meeting at Community Rehab in Annapolis that day in terms of the brain power present in one small room. Chet has a doctorate in oceanography, both Dr. O'Donnell and Dr. Fryer are

neuropsychologists, and Jim is a geophysicist. I knew such power could solve any problem.

Jim told me he began the meeting by saying, "Tell it like it is. If I have problems, let's hear about it."

In several different ways, Dr. O'Donnell and Dr. Fryer said, "Initiation is a common problem following head trauma."

After several repetitions of this idea, a light went on in Chet's mind. "We thought Jim wasn't interested," he said.

Dr. O'Donnell counseled Chet on head trauma. "Healing continues for a long time. We are still very early in the process, and Jim has made good recovery. I think he will do well in the long run."

We never told Chet what we expected him to do with his knowledge. It was his to use as he saw fit. However, some of his colleagues said to me on occasion afterward, "I understand this is going to take a long time." That understanding and expectation on the part of his colleagues played an important part in Jim's recovery.

In his battle with fatigue Jim's arsenal had one secret weapon. Jim had the ability to drop off to sleep for short periods of time and wake up refreshed, something I find impossible. Returning from the cafeteria at work he began shutting off the phone, locking the door, and putting his head down on his desk for thirty minutes. Dr. O'Donnell dubbed them "power naps." They saved his afternoons.

Jim and I hoped he would be able to return to work full time in December, but fatigue was like an enemy submarine, circling, alert, torpedoes loaded.

WHEN IS A HUSBAND NOT A HUSBAND?

In late fall some of Jim's colleagues gave a dinner in celebration of his recovery. The evening ended with a surprise. "I propose a toast to the good luck Jim and Phyllis have shared this year," one colleague began. "It may sound funny that I speak of good luck, but I think you have had lots of good luck compared to what might have been." All of us at the table nodded in agreement.

"In searching for a gift to celebrate that good luck," he continued, "we thought of the oriental philosophers who took the bird as their symbol of good luck. There were many reasons for this, but one of them was the bird is able to soar above danger when it comes."

My cardinal banging into my bedroom window had reminded me many times over the summer that good luck in my life was possible. Jim's colleague could not know how appropriate a symbol he had chosen.

As he handed me a small package, he continued, "We are giving you this bird, which came from a market in Beijing, in the hope that you will touch it each day to remind you of your good luck both this year and yet to come."

In the following days, good luck birds puzzled me. "What difference did they make?" I kept asking, knowing the birds themselves did not cause good luck but sensing they contributed in some way. Over and over, just as I thought I had captured the answer in my mind, luck's unseen, untouchable, indescribable something twisted from my consciousness.

Then it dawned on me. The birds provided the concreteness I needed. I could focus on them, as I could not on the idea, to reinforce my belief that good luck or good times were possible in the face of tragedy. Believing good times were possible did make a difference. That belief accompanied me as I sought up-to-

date medical care. That belief prodded me to find solutions to the problems of Jim's re-entry into the work force. Sometimes that positive, forward-looking mindset was the only thing that got me through a difficult situation.

Despair is the absence of that belief. Had I chosen to believe I would fail, I would have failed.

This led me back to the question of prayer. Did prayer make a difference? Is not prayer the affirmation that an all-knowing, all-powerful force (named God) designed a world where support, knowledge, love and healing (other names for good luck, perhaps) exist along side disease, ignorance, hate, and injury? Is not prayer a reinforcement of the belief that healing can follow injury, that wholeness can replace fracture, and that a better tomorrow is possible no matter how painful today is? Is not prayer something concrete to reinforce some elusive truths?

Prayer is a turning away from despair and that made a difference. Our community of friends who affirmed life through prayer bolstered us in our time of need.

My family called in November and December to ask how Jim was. "He's doing well," I responded, "but he's not yet back." It was difficult to explain how Jim could have returned to driving and going to work three days a week and still not be healed. My response was the same in January, "He still has a way to go."

Going to work each day is not the same as working. Each evening Jim shared his day with me, and at first I was struck by the number of extraneous tasks he had done. He attended seminars he saw advertised. He sent a memo concerning the phone directory he found hard to read. He took in a magazine article about

thyroid problems and spent the morning handing out several copies. I listened for some mention of working on research. He resented my questioning him about it. Then, intermittently, I began hearing about personnel problems he worked on or discussions of future research.

His old personality began asserting itself when he talked about his return with his colleagues. "I'm not coming back 100 percent," he told them. "I've just had a sabbatical where I learned a whole new field—neuropsychology—and I'm coming back 110 percent. I've had six hours of tests now, and I can prove I'm O.K. Furthermore, I've learned how to run all these covert psychological tests on everyone, and some people have passed them and some have not."

His colleagues squirmed at the suggestion he was studying them. He really was not, but the understanding he now had of cognitive processing helped him analyze situations in new ways.

At an all-day meeting on a satellite project, he observed the scientists concentrating for three hours without a break. At lunch the conversation focused on the same research. Two more hours of intense discussion followed. As the meeting broke up at 3:00 P.M., these distinguished scientists could not establish a time for the next meeting. One would be agreed upon, and then someone would remember he or she could not be there. Jim realized their minds, exhausted from such long immersion in one subject, could not switch gears to call out of long-term memory the information needed to make a decision.

As Jim became more involved in his work, he realized he did not wish to return to the same role he had before. The day-to-day research could be left to younger scientists. He felt his role should be that of facilitator and leader. Dr. O'Donnell at Community Rehab encouraged him in this.

Home was the place where the submarine of Jim's injury fired its torpedoes.

In explaining what happens when someone with head trauma gets tired, Dr. O'Donnell used the analogy of the tired two-year-old who gets cranky. If the most contented toddler is taken shopping, lugged in and out of a car all day, and misses his nap, no one can get along with him. The stimulation and the lack of rest combine to overwhelm his cognitive functions, and the child lacks the ability to gain control over his emotions.

By the time Jim returned home from driving to work, taking part in scientific discussions, talking on the phone, and catching up with what had gone on during his absence, his brain could handle nothing more. Some evenings he plopped on the sofa after dinner and fell asleep. Those were the good times.

"You goddam son-of-bitch, I'll show you," Jim would yell as he banged the side of his stereo system when it stopped working periodically.

"Goddam it, you son-of-a-bitch, goddam," Jim would yell from the basement. Perhaps he had dropped a wrench or forgotten where he had put a screwdriver.

Sometimes his stream of cusswords was directed toward our neighbor's farm. That neighbor could win the Olympics in cussing, but Jim had never felt the need to answer back in kind.

Monday might be fine, but by Friday all his reserves were depleted. One Friday he tried putting Trac II blades on an Atra Plus razor, which is similar but slightly different. Head trauma injures the ability to look at other solutions when the first one does not work. "Goddam, son-of-abitch. You goddam son-of-a-bitch. Goddam it, you son-of-a-bitch," he yelled at the razor. I came in and explained the problem. It was 6:00 A.M., and for Mathew and Melissa his outburst was their alarm clock.

At times there seemed to be little emotion behind the cussing. He called me to look at the used hood he had bought for his old tractor. "This really looks nice, doesn't it," he

asked. Then with no change of expression or warning he yelled, "Goddam, son-of-a-bitch," and continued in a normal voice, "that wire is loose."

Jim's progress then became measured in terms of one less goddam or son-of-a-bitch, or one more day between outbursts.

On December 11 Jim went to the orthopedic surgeon. Waiting in one of the examining rooms, Jim shared with me the encouraging calls he had received that morning at work from his colleagues around the world. We realized he had not been forgotten during his long absence.

The doctor spent a lot of time with us going over Jim's X-rays and commenting that Jim's bones were healing unusually well for those of a fifty-year-old man. "I think you are younger than your wife says you are," he teased.

Life felt good. I asked Jim to stop at the Safeway on the way home as a snowstorm was predicted, and I needed to get some milk and bread in case we could not get out for a while. Jim remained in the car, and my errand took longer than I expected because others shared my concerns about the weather.

Walking out, I heard the dueling horns. The first horn was located in the first row to the left very near the door. After it beeped a couple of times, the other horn echoed from the end of the first row on the right, near where Jim was parked.

Walking to the car, I prayed, "Please. Not Jim. Please, not Jim," but my fears were realized.

In the car he gloated. "See. That kid is going wild in that other car. I answered him and then I didn't, so he really started beeping. I had him going so much."

"Jim. Let's just leave, please. That kid looked like he was about six years old."

"So. I showed him. He couldn't figure out what was happening."

This geophysicist believed he was a big man because he could outsmart a six-year-old.

"How," I wondered, "will he ever be able to deal on a level with other scientists when he acts like this?"

That evening at supper, he bragged to Melissa about how he had really had the kid going. "Dad," she said, "you need to grow up."

Melissa's words were as accurate as the most knowledgeable neuropsychologist could have used. One effect of head trauma is that the victim often seems younger and exhibits behavior common to him or her at an earlier age.

In the movie "Big" a thirteen-year-old boy goes to the carnival and finds a magic machine called Zoltar. The boy wishes to impress a girl so he asks Zoltar to make him bigger. The next morning the thirteen-year-old awakens in a thirty-year-old body. The comedy and truth in the film are based upon the incongruities between the two. At times living with Jim was like being thrust in the middle of the movie "Big"—except our lives were not a comedy and the difficulties were not going to be resolved in two hours.

In December, every conversation we had with Jim hooked into his long-term memory at a point where the knowledge of his ancestors was stored.

For example, I told him of a conversation with my mother about how much easier word processing is than typing. My mother had replied, "Yes, everything is easier but somehow we don't have as much time as we used to. What do you suppose happened?"

I thought it was an interesting topic to pursue. Jim's response was, "Yes, John Wesley used to go to town every Saturday, and all along the way he would take the time to stop and speak to people and find out what was going on in the world." Jim then told me in great detail about John Wesley Marsh, his great-grandfather who died in 1922.

When news of the end of a miner's strike was in the paper, Jim commented, "I believe Little Grandpap was a miner, wasn't he." Little Grandpap died in 1956.

Jim related minute details of events from his childhood. In the early sixties his father's sister came from California to visit. When it was time to take her to the bus, his father was late in feeding the cattle and did not change his clothes. They visited an uncle on the way to the bus station. This was unimportant detail, but in Jim's telling it was as if it had happened yesterday.

His behavior changed as he adopted the persona of those farmer ancestors from McAdoo Ridge, West Virginia. He insisted we buy him suspenders to wear. "They hold my pants up," he said, even though with the weight he had put back on, his pants were too tight in the waist to fall down, and the suspenders, with nothing pulling down on them, usually came off. He wore plaid shirts, long underwear, and old pants. He smoked a pipe, and for four days he did not take a shower.

Bruce Marsh came to visit over Christmas and commented, "Jim seems older somehow."

One of his ancestors could imitate the sounds of a pack of dogs chasing a fox. First would come the sounds of dogs barking from far off, then his ancestor would get louder and more intense as he pretended the group passed in front of him, and then the sounds would taper off as the dogs went off into the woods.

During this period of imitating his ancestors, most of whom he had only heard about during his childhood, Jim started agitating the dogs in our neighborhood. He would go outside and bark for five to ten minutes. He was happiest when the dogs in the neighborhood barked back.

Several times he told me how as a child he had walked past a dog at his great-uncle's house and the dog had suddenly lunged at him. The event had scared him.

When my thoughts were broken by the sound of Jim's barking, all I could think was, "I did not marry a barking dog." And then, as on

several occasions in the recovery process, it occurred to me that some things might have been easier had Jim died.

I was surprised that his emotions were ruled by the point at which he locked into his long-term memory. Intellectually, he knew he was Mathew and Melissa's father, but when he acted like his ancestors, he seemed to lack the feelings of being their father. His disinterest made them feel rejected. He unplugged the phone in our bedroom when he went to bed because he did not want to be bothered by the outside world. He forgot that Mathew and Melissa were out, and if they ran into trouble, they needed to be able to reach us. After Mathew tried unsuccessfully to reach us one night, I learned to check for a dial tone just before I got into bed.

It would have been easy to nag Jim all the time about his behavior, but the mechanisms in his mind that would enable him to work on the problem were already taxed to the point of exhaustion by his return to work. I hoped the healing process would correct the situation. It was intolerable, though, to have everything in life relate to those old codgers. In their time, they probably did as well as any one, but they had not lived in the world I was dealing with.

After much deliberation, I told Mathew and Melissa we would follow the theory behind therapy and try to strengthen the pathways in his mind that led to more recent events. Thus, when he started remembering the past, we would change the subject rather than get angry. We would mention our trip to Arizona in 1985 or a fishing trip when the bluefish were abundant in the Chesapeake. It was my theory, perhaps more my hope, that if we stimulated his recent memory, his behavior would match more recent times.

If he would not stop talking about his ancestors, I started talking about one of mine, and he changed the subject.

I later came to understand what was happening in Jim's mind when I read a book entitled The Man Who Mistook His Wife for a Hat by Dr. Oliver Sacks. He told of a seventy-year-old woman who was orphaned in Ireland before she was five and brought to this country to be raised by relatives. She had no memory of her parents. Following a stroke, she kept hearing a lullaby in her mind and began to feel as if she were in her mother's arms. The realization she was remembering her mother's singing comforted her. The stroke had occurred in that part of her brain where that memory was stored and caused it to become prominent. As her brain healed, she stopped hearing the lullaby.

Once a month Brian scheduled a conference at Community Rehab for Jim and me to meet with the therapists and discuss Jim's progress and whether we needed to continue therapy. I asked Melissa to attend one of the meetings so she could know what was happening.

"We are still very early in the healing process," Dr. O'Donnell told her. "Your dad is still going to get a lot better."

One Saturday, when the cussing and the barking got to me, all I could do was repeat, "I refuse to give up. We are going to make it through this."

It was Melissa who soothed me. "Remember, Mom," she said, "Dr. O'Donnell says Dad is still going to get better."

Progress, and healing, then came to be measured by fewer stories of long-ago ancestors and longer periods of time between the dogs barking.

Jim's head trauma manifested itself in quiet conversations at the dinner table. Organizing thoughts and expressing them in logical sequence are difficult for anyone but for someone with head trauma these tasks can, at times, be impossible.

A typical exchange started out by Jim saying, "Bob is sending his daughter to France for spring vacation."

"Oh. That sounds interesting. How old is his daughter?"

"I think she's a junior in high school." He then added, "The trip costs \$1,500."

"I'm not sure a high school student could get that much out of the trip," I answered.

"Yes," he started in, "you know how they talk all the time. They would be talking with each other rather than looking. Their attention span is about fifteen minutes so they wouldn't be interested in doing anything. It's just purely a case of the tail wagging the dog rather than the dog wagging the tail."

I was shaking my head by this time. "Jim, I haven't the slightest idea of how that applies to what you are talking about."

"Well," he said, "the dog usually wags his tail, but if something is wrong, then it is the tail wagging the dog."

"But what does that have to do with sending a child to Europe?"

"Well," he said, "I think those trips are just a bunch of businessmen trying to make a buck out of someone. People just have too much money to spend. Parents don't spend any time with their kids so they bribe them with a trip to Europe. Kids know that and so manipulate their parents."

"Jim, I don't think that applies to all parents and why they send their kids on a trip."

"I didn't say it was true of all parents. You are putting words in my mouth," he responded.

At no time did I feel we were communicating with each other on the benefits of travel for high school students. True conversation requires focusing clearly on the topic rather than regurgitating cliches, and Jim's mind now called up the latter.

At times, Jim pontificated. He knew exactly what the world was all about and delighted in telling me.

My neighbor and I went to visit some model homes in the neighborhood. "Jim, Peggy and I really enjoyed that. The first house was

very traditional, but the second one was weird. It had a Roman motif with marble busts and pink and white striped wallpaper.”

He answered, “You know people buying those homes can’t afford them. People don’t know what’s important. Both parents are going to have to work, and the kids are going to grow up thinking they have a right to everything. People don’t know what its like to really have to work to make a living.”

I stopped sharing my thoughts with him.

But decisions had to be made because life was continuing, and many of them I made on my own. Melissa needed to find a college. Most applications had to be in by February 1, many of them before that for scholarship consideration. As Melissa began her search, Jim showed no interest.

“Melissa,” I told her, “in the long run, when Dad is healed, he will care.”

Adding extraneous detail to a story is common for someone with head trauma. If Jim were trying to explain about a car his co-worker was selling, in December his story might have gone like this: “Well, to make a long story short, Ken is from Missouri. He graduated from a teacher’s college out there in the early seventies, and then went on to get a master’s degree in math from Iowa State. He didn’t know where he wanted to work so went to California for a while before he came back here. He is a friend of John Smith, whom I met working for Data Tech back in 1978. John asked me if Ken might get on at Goddard so I interviewed him and brought him on board. At any rate, he has this 1989 Buick and so he doesn’t need his 1979 Plymouth and wants to sell it.”

It seemed like his mind loaded everything it knew about a subject into his working memory, and then could not sort out what details were needed to answer the question of the moment.

After several such encounters, I called up Brian, the speech therapist at Community

Rehab, and explained what I was up against. “Phyllis, those are things I can help with,” he reassured me. Jim still needed therapy.

Dealing with Jim’s thought processes one-on-one at home was difficult enough. I did not worry too much about his thought processes at work because Dr. O’Donnell had said that overlearned processes come back more quickly following head trauma. Jim’s work fell in that category, and he was always more rested when he went to work.

In life, though, we interact with many people beyond our work and home, and we often express opinions that cause others to judge us. For the most part, I did not worry when I was among friends that Jim’s processes were fuzzy. They knew and respected him from before. A visit from our pastor, though, was different. Assigned to our church in July, she had spent the summer and fall getting established. By late November and early December she was trying to complete her visits to the homes of all the church members so she would get to know them. “How do you get to know someone who is healing from head trauma?” I wondered.

Under the leadership of one of the young couples in our church, our members became interested in the homeless problem in our county. The church started preparing a meal for a nearby shelter, and one Sunday a month several hundred sandwiches were prepared and taken to downtown Washington for distribution to the homeless there.

Homelessness is a complicated issue. Intelligent people who have studied it from all angles do not have the answers. Someone with head trauma, though, can think he knows the answers. Cliches such as “I don’t think we should just give people food because people don’t appreciate anything unless they have to work for it” replace serious study of the underlying causes. Jim was prepared to offer his lecture to the pastor on how the problem should be solved—a problem he had never studied.

I wrestled a long time with how I should handle that visit. We liked her, and I asked myself what I owed her in terms of preparation for the visit. If she came expecting a thoughtful scientist and Jim came on too strongly, I wondered if she would understand. I wondered how I would handle my own feelings watching Jim express cliches and think they were knowledge.

I considered calling to tell her about head trauma, but somehow I held back. Finding the energy to reveal my concerns to someone new was difficult. I knew I was not responsible for Jim's behavior, and I objected to taking that first step toward what seemed to be an apology for it. Besides, if Jim were going to live in the world, he needed to learn his ideas would be questioned and find ways to handle it. At no time did I consider confronting Jim about the ways his cliches on homelessness were limited. His energy needed to be focused on work, and I realized I could correct him only a limited number of times before he would resent it. The problem of homelessness did not need to be solved by us at this time.

Several things helped make the visit a pleasant one. For many reasons it kept getting postponed. When the pastor came in mid-January, Jim's thought processes had improved. He did not tire as quickly or pontificate as much. In the meantime, a good friend became interested in helping the homeless and shared quiet conversations with Jim about the complexities of it. On this issue Jim listened to his friend more than he would have to me. Our pastor had met many people who disagreed on positions taken by the church and responded without difficulty to Jim's comments.

Looking back, I am glad I never took that first step toward accepting responsibility for Jim's behavior. Somehow, I think doing so would have been too easy, and I might have taken that responsibility again and then again. I am willing to educate people about head trauma, but

recovery in the long run meant Jim was responsible for his own behavior.

Jim had difficulty keeping track of where he placed items. Our cognitive processing should hold in working memory the fact that we have just picked up an item. Many things might disrupt that process, including distractions or stress. For head trauma victims, the problem is that the process may only work sporadically.

Jim called to me one Saturday, "Phyllis, do you know where the nozzle to the hose is? I can't find it anywhere."

"I'm sure I put it on your workbench yesterday," I responded.

"Well, it's not there. Goddam it, why can't anything ever be put back in its place? Goddam."

After retracing my steps from the day before, I was sure I had placed the nozzle on his workbench. In trying to understand what might have happened, I theorized he had picked the nozzle up, and because it looked like a pair of pliers, put it in one of the drawers. I began checking all of them to see if I could find it.

Five minutes later Jim came into the basement. "Phyllis, I found the nozzle."

"Good," I said. "Where was it?"

"Well," he said, "I could have not told you, but I decided to be honest. It was in my pocket."

It takes a lot of cognitive energy to be cussed at, to be blamed for misplacing something that you know you have not, to live with someone who has difficulty communicating, to remember you are reaching for a long-term goal of healing, to remember these changes were caused by an injury, and to remember that anger would only exacerbate the situation. Holding all those ideas in working memory while figuring out a response took all the brain power I had at times. Sometimes I was too tired to succeed and did the only thing I knew to do—I ate chocolate chip ice cream. I knew eating did not solve a thing, but I had no energy to work out a different solution.

To my credit, I never put Jim down by saying, "You have the head injury, not me."

Luckily, I never used my struggles as an excuse to spend money on myself. From the time Mathew was born, I have been the family bill payer. Jim never worried that I would overspend or forget to pay the bills. I had often heard of women who are suddenly widowed and cannot comprehend their finances. In our family, Jim would have had the difficulty if something happened to me.

That system was an asset during Jim's recovery. He did not squander his energy worrying about money, and we did not have to work through our fuzzy communication system to arrive at any compromises on spending. He trusted me, and I came through.

As healing progressed, Jim began playing his extensive collection of records and became interested in making a tape for Brian of the songs that expressed Jim's views of life. He gave a lot of thought to the selection, and after that enjoyed his music again.

In January Jim learned of a 1956 Ford pickup truck that might be for sale. For years he had wanted a 1955, 1956, or 1957 model. He and Mathew went to look at the truck on a Saturday. "Let's just look," Jim said. "I won't work on it for a while so we can leave it there until spring." But someone who suffers from head trauma has difficulty getting off a subject. It's as if once an idea is brought into working memory, the mechanism for sending it back to long-term memory fails.

Jim paid for the truck on Monday and that evening began to talk about getting it home the following weekend.

Mathew became concerned. "Mom," he said, "I've already planned something for Saturday. That truck hasn't been moved for a while, and Dad might have trouble on the way home. If he wanted it, why didn't we just get it last Saturday?"

Jim would not be deterred. "I am going on Saturday no matter what anybody says." We

were reassured when a friend agreed to ride with him and help if a problem developed.

That Saturday several people from Jim's work were coming to our house for a potluck dinner. A friend was bringing a powerful telescope so we could view Venus. Jim needed to conserve his energy for the party.

Jim left around eight in the morning and arrived back home, luckily with no problems, at around two in the afternoon. Instead of resting, he started tinkering on the truck and only came up to change his clothes after some guests arrived at six. After the party, Jim went to the garage and continued tinkering until 12:30 A.M. Three times I went down to urge him to quit.

When I awoke at 5:30 A.M., Jim was already in the garage. That day he quit only to eat and go to church. As the days progressed I lost track of the number of times Jim polished his truck. He washed it and put a coat of wax on by hand. He bought a cleaning compound and abrasive and tried that on it. He went over it again when he bought a new polisher. Each time, I was called upon to admire it. The fenders and bumpers were dented beyond repair, but the hood and top began to look like they were in a showroom. I realized the truck would have been new the year Jim graduated from high school, the time in life when boys are most interested in new cars.

Jim started going into work four days a week in January, a concern to us and his doctors because we felt he might not have the stamina. Squandering his energy on polishing his truck every night endangered his heavier work schedule. When he cussed because of fatigue from work, I understood, but when he cussed because of fatigue from polishing the truck, I felt abused.

At breakfast I finally laid it on the line. "Jim, you are going to have to listen to me." My five years of school teaching experience showed in every word. "Your most important goal right now is going back to work. If you continue using your energy on that truck, you are going to start

making significant errors either at work or driving and cause yourself harm. That truck can wait.”

After he left for work, I called Dr. O'Donnell at Community Rehab for reinforcements. “Jim has forgotten he needs to watch his fatigue,” I complained. “Can you work with him on that?” Dr. O'Donnell assured me he would.

Because this was the only thing I had jumped on him about, Jim listened.

Many times Jim's colleagues or our friends told me, “You really have been very lucky and have a lot to be thankful for.”

At first I responded quickly, “Yes, I do.” As Jim's recovery continued, I found myself pausing longer and longer before I could answer. I had seen enough head trauma victims to know Jim was recovering well ahead of the norm. However, there were also many things I was angry about, and reminding myself to be thankful did nothing for that anger. Finally, I realized our minds are designed to store all feelings, angry and thankful ones, and one feeling does not erase the other.

“Yes, I do have much to be thankful for,” I agreed. In my mind I always added, “And, yes, I have a lot to be angry at.” Acknowledging the anger released some of its potency.

In understanding my anger, I finally faced my loneliness. My sister-in-law Sylvia put it best. After I explained the changes in Jim, she remarked, “You really miss Jim, don't you?”

Yes, I did.

I missed him at the dinner table. I missed being able to talk with him about ideas and feelings and people. The person with all these fuzzy thinking patterns was not the Jim I took to the airport on February 20, 1989.

I missed hugging him. Who wants to hug a barking dog?

I missed him as we sat in church. I used to go places with Jim and feel a sense of pride that he was my partner. Now I waited for torpedoes to hit.

I felt alone as we listened to the therapists talk about Jim's injury. “Jim and I were equal in intelligence before, and we still had to work at decisions,” I grieved. “I haven't had head trauma. How will I feel if he remains impaired?”

I felt alone when I listened to wives complain about their husbands. “At least you can argue with him,” I thought.

I was lonely when we went to bed at night. Physical feelings toward another person are grounded in the mutual sharing, closeness, respect, pride, and humor of the present, not in the memory of what used to be.

I had no interest in cleaning house. I went to the Safeway every day because I could not decide until mid-afternoon what I would cook for dinner. I fixed the same quick meals week after week. “I'm depressed,” I realized, and then felt better when I read a study done of the wives of Israeli soldiers who had suffered head injuries. A survey taken three months, six months, and twelve months post-injury showed a significant level of depression in the wives. “I know why,” I thought.

I reflected on the first time I faced loneliness in my life. After college, I taught school in Elgin, Illinois. In my fourth year of teaching, my roommate got married, and I decided to live alone. I had grown up in a large family, lived in a college dorm, and finally shared an apartment with a roommate; living alone in a town three hundred miles from my family was a shock. When I left work on Friday, no one cared what I was doing until I returned on Monday. After recognizing my loneliness, I finally accepted responsibility for it and conquered it by playing bridge, volunteering at the local hospital, and working at the library on my teaching units.

“Maybe,” I now told myself, “I should be thankful I learned to face down loneliness in a less complicated setting. It was hard enough back then. What would it have done to me now.”

HEALING

Jim celebrated his fifty-first birthday in a special way. The French Space Agency scheduled the launch of a satellite, called Spot 2, sometime in December. The launch was delayed until early January and then delayed again. Speaking with Michel, Jim joked, "Maybe Spot 2 can be launched on my birthday." As the countdown continued, the launch was scheduled for January 21st, Jim's big day.

The French launch their satellites from French Guyana off the coast of South America in a time zone similar to ours. The scheduled launch time on Sunday morning passed with no call from Michel. "Oh, well," Jim and I told each other, "we still have all day."

At 10:00 P.M., the phone rang. "Happy Birthday, Jim." Michel was as excited as we were. "I just received word that Spot 2 was launched a half hour ago and everything is working fine."

In early February Jim was asked to give a presentation to his co-workers about the Spot 2 satellite. The project would tax his ability to organize his thoughts, respond properly to questions, come back to the topic at hand if he got sidetracked, and remain interested.

The day after the presentation Jim suggested I call one of his colleagues in order to get some feedback in case there were problems he needed to work on. That I could call someone I had never met and discuss with her specific problems caused by head trauma and how Jim was handling them illustrates how Jim's co-workers as well as his therapists had become our partners in his healing process. Jim asked her to be honest with me.

"Technically, Jim was very good," she said. "If he did not know the answer to a question, he said so. Those he did not know the answer to nobody expected him to know."

"What about his organization?" I asked.

"He stayed on the topic very well," she responded. "Somebody scooped him about the satellite being launched on his birthday, but Jim responded in such a way as to make it his story without repeating what the other person said."

"Did you notice any fatigue?" I asked.

"No. I finished speaking to him around noon, and he seemed fine then. That's a real improvement. Last fall, I felt he could only talk for about ten minutes on something before his mind wandered. Now, I feel he talks until the conversation comes to a normal end."

"Initiation can be a problem following head trauma. Do you notice any difference in Jim?" I probed.

She hesitated a little on that one. "Last fall everyone felt Jim was not interested in the work. I heard people comment that physically he looked fine and he sounded fine, but he wasn't involved. But he did an excellent job in preparing for this presentation and even brought in information he had gotten from the French."

She continued, "I am not sure if there is a hesitancy in Jim. Always before when I went to him with a new idea, he would think about it before responding. There is a hesitancy now, but there was hesitancy before, and maybe it is the same."

After I explained that Dr. O'Donnell said healing would continue for several years, she said, "I have noticed so much improvement each time I see Jim that I really think he will be fine in the long run."

"This event," she continued, "changed us all. I went to the synagogue and prayed in front of the Torah for Jim's recovery. I have never told Jim that because we are of different religions, and I did not know how he would take it. I am so glad he is back."

Tears welled in Jim's eyes when I told him about this conversation.

Working four days a week was going well, and Jim and I began to go places for fun. Again, fatigue was waiting for us.

One Friday, I met Jim at work at 3:00 P.M. so we could go to a music store that had a large selection of folk music records. A college-age couple came in while we were browsing. The boy was small, pimply, slightly unkempt. The girl was probably his first love interest. They sought a specific "in" tape—Pete Kennedy at the Birchmere. As they were going down the tapes and reading titles, the boy said, "The Greatest Hits of Burl Ives. That must be a small tape." The girl giggled at his sophistication.

A couple of minutes later, Jim erupted as I walked up to him. "Did you hear what that kid said? Burl Ives' Greatest Hits."

"Jim, not so loud," I said.

"No. I'm going to tell him. Who does that young punk think he is? Burl Ives was around many years before he was born." He meant for his voice to carry across the room.

"Jim, you do not have to make an issue of it. Shhhh." I nudged him on the leg and he was quiet. Embarrassed, I walked away.

No store owner was going to let someone pick a fight over different tastes in music. The kid was speaking only to his date not to Jim, and because of his fatigue Jim missed a lot of clues that should have told him there were other ways of looking at the situation. Jim's disinhibition could have led to an unpleasant confrontation.

It took me a while to calm down, and on the way home I grieved for both of us. Going out with Jim made me very apprehensive about getting into difficult situations. Once we might have been able to reminisce about our own early dates and chuckle over the boy's bravado, but his brain injury robbed us of that closeness.

I realized that four days a week at work was all Jim was ready for if by Friday afternoon he showed this much evidence of fatigue.

As healing progressed, Jim's language clued me in to his new phase. We were at a store one evening when I asked him what time it was. "Two hairs past a freckle," he said.

I had not heard that phrase since college.

When the news was finished one day, he said, "They're rioting in Africa, they're starving in Spain. There's hurricanes in Florida and Texas needs rain." Looking out the window, he said, "Spring has sprung, the grass is riz, I wonder where the birdies is." Both were sophisticated comments when we were in our early twenties.

In conversation, Jim told old college jokes as if he had heard them last week. In sexual innuendoes, he referred to his pecker. Gone were the suspenders. He renewed his interest in radios and began acquiring gadgets. One evening I realized he was listening to the local police channels, something he had not been able to do before. When I questioned him, he bragged, "See, I fooled you. George and I went to Virginia this afternoon and bought this. You thought I went to work, didn't you? All I have to do is take this little plastic card, and I can get anything."

In the car he became very aggressive. When a car pulled out in front of me, he yelled, "Doesn't your horn work? Don't let them get away with that." The horn in his Monarch was rather quiet, and he spent a Saturday replacing it. He reminded me of Mathew, who often told me I drove like an old fogey.

Then the fires began. When we first moved to the country, we burned our trash because there was no pick up in our area, but in 1983 Mathew had been badly burned in West Virginia when the gasoline he and Jim put on a pile of leaves to help it burn exploded. After that Jim and Mathew had great appreciation for the destructive power of fire, and we got rid of the burn barrel.

Jim was a packrat and had some old wood, car parts, and junk behind our garage. He began cleaning the area out, and one day I saw thick black smoke darkening the sky. Jim had turned an oil drum into a burn barrel.

On a windy day in February Jim came home early. Busy in the house I did not notice the flames until they rose ten feet above the barrel. When a gust of wind came, fire brushed the spruce trees ringing our yard as well as the gas tank area of the 1967 Plymouth Barracuda Mathew had bought. Scared that anyone would build such a large fire, particularly on a day when the wind was gusting so strongly that the flames could be twisted anywhere, I ran to the garage. "Jim, you have to put that out!" I yelled to make myself heard above the wind. "If there are any gas fumes in that tank, it could explode and you could kill us all. This is too dangerous."

Jim's eyes gleamed with excitement, but he put the fire out. That night at a concert I could not enjoy the performance. Jim's pretense of anger at me for yelling at him and of contriteness at his foolishness could not mask the far away, contented look in his eyes as if he had found an inner release of energy that was satisfying.

When I called Dr. O'Donnell to ask his advice, he was away on an emergency. The next week he was gone again, and I never found an explanation for Jim's behavior.

For several weeks I felt like I was watching a small child. When Jim was home, I monitored the garage area because he was unable to let go of his fascination with the fires.

In March during Jim's college phase, we visited the farm in West Virginia for the first time since his head injury. Getting ready illustrated many of the residual problems of head trauma. Jim waited until the last minute to buy the lumber we were going to need to fix a garage; he worked on making lists of things to do but never got around to purchasing the universal joints Mathew needed to put in the truck before we drove it. Jim hardly slept the night before we left.

Jim's emotions matched his mental age, and I felt my worst nightmare was coming true. Jim's mother and father had run a truck farm. I remember them as two of the hardest working

people I have ever known, and I have fond memories of good times. From the first time I went to the farm, though, I remember troubled family relationships concerning the farm and the way in which Jim and his brother and sisters related to it. There was anger because some took advantage of the farm; when work needed to be done, it was difficult for them to sit down and figure out a plan of action. At times some members of the family stopped speaking to others. Jim's father died in 1972; his mother died in 1984. Jim and I had spent a lot of energy since then working through those relationships while remaining friends with his family. The previous fall the farm had been divided in a way that all four siblings felt comfortable with.

Now it seemed that all the understandings Jim and I had worked so hard to achieve concerning his family had been wiped out in Jim's mind. During that first visit Jim became so angry because he felt someone slighted him that he was not going to speak. At one point, while Jim was operating a chain saw, his anger overwhelmed him so completely that he became a danger to himself by swinging the saw wildly. Mathew threatened to take the saw away if Jim did not calm down.

I knew I did not have the interest or the energy to work through those relationships again, and after that weekend I found myself wondering, "If Jim's emotions are tied into his college days, and we did not meet until after he was out of graduate school, would he really miss me if I left?"

At breakfast one Saturday Jim was telling me how he almost joined the Coast Guard shortly before he graduated from high school. I could tell the memory was vivid, but I also felt Jim was rested enough that I could discuss the implications of such memories with him.

"Jim, in the book The Man Who Mistook His Wife for a Hat the doctor explains about a lady who has a stroke and hears her mother singing lullabies, something that happened over sixty-five years earlier. Sometimes I hear you

explain something that happened long ago as if it happened yesterday. I think your head injury has affected your long-term memory in the same way the lady's memory was affected by her stroke. Do you know what I'm talking about?"

He stared at me before he answered. "I knew my memories were very vivid, but I didn't know they were related to head trauma."

"Last fall was very hard," I explained, "because everything we did you related back to years ago."

That made him angry. "Why didn't you tell me this then? It's like having a dirty face. If I had dirt on my face, you would tell me to wash it."

"Because," I explained, "there were so many issues to deal with. I could have been on you all the time, but that would have been counterproductive. I felt getting you back to work was more important, and I felt as you got involved in work, your more recent memories would come back."

As we discussed this, I suggested he might want to tape his memories. Then when he retired in a few years, when he might not be able to recall them as well, he could use the tapes to write a book.

He later discussed this phenomenon with Dr. O'Donnell. "Many people seem younger following head trauma because of this," he told Jim. "The healing process goes much quicker, though, than growing through it did. It is not like you have to live through your whole life before you are healed."

After that Jim monitored the number of stories about his ancestors he told us and realized we became bored if he continued too long.

Sitting at traffic lights I often thought about Jim's roommate at Montebello. He was a mechanical engineer. His many visitors indicated he was well liked. While on a business trip to Philadelphia, he waited in a left turn lane with his turn signal on. The next thing he knew he was in the hospital. An oncoming car had crashed into his leaving him with a severe head injury.

"What if that happened to me?" I wondered. "What would I be like if my long-term memory were activated?"

The martyr in me also caused me to ask, "Would Jim Marsh have bothered to learn as much about head trauma if I had been the one injured?"

At other times I asked myself, "What would it be like if Jim's memory locked into the times when our marriage was good?"

There were no answers to my questions, but asking them helped me get over a rough time.

In March, Melissa made her college decision. She had fallen in love with Loyola College, located in a beautiful old section of Baltimore near where Bruce Marsh lives, when we visited the campus the previous fall. I liked the school's Jesuit philosophy of educating the whole person.

"Melissa, this is the kind of education I had at Grinnell. I would not have been able to handle this past year without it. It's worth every effort," I had told her, "so go for it. But please remember that after what this past year has cost, you will have to get a scholarship for us to afford your tuition and other expenses."

On a visit to see Bruce in March, we drove Jim around the Loyola campus. We showed him the catalog, and he studied the backgrounds of the faculty. The number of doctoral degrees impressed him. When the letter offering Melissa a Presidential Scholarship covering a big portion of the tuition came, Jim was ecstatic. The father who showed no interest in Melissa in the fall had healed to the point of being her strongest supporter. As his colleagues called from around the country and the world, he shared his pride with them. "Go for it, Melissa," his actions said. "You're worth it."

In early spring Jim and his co-workers moved to a new building. Three years earlier Jim and I had purchased a blue plaid wool carpet for his office, but he had never installed it because moving the furniture would have been too difficult.

"Jim," I suggested, "since they are going to move all your furniture, why don't you put down the carpet before they put everything into your new office?"

The carpet just fit. That first day Jim told me, "Phyllis, you cannot believe how much difference the carpet makes in the noise level."

The cinder block walls and tiled floor had provided no cushion for sound. When Jim's mind had to block out the sound bouncing around in his office, he quickly became fatigued. Now that energy could be focused on work.

There was also energy left when he came home.

By this time, his suicide attempt was almost forgotten. Many people had come forward with their own tales of difficult times. One colleague told Jim she had a friend who committed suicide and it was later determined she had a thyroid problem. I learned of one colleague who, upon hearing of Jim and his thyroid history, asked his son in medical school if that could have caused the problem. After doing some research, the son called back and said yes. The truth will always be supported.

Jim and I were talking about his injury one day when I commented, "Jim, aren't you glad you don't have to worry about what people know? If you had to worry each time you met someone if he knew about your jumping, it would take so much mental energy you wouldn't be able to function."

"You're right," he answered. The truth had set him free.

The extent of Jim's healing could be measured by a meeting he attended in mid-April. Jim headed a team of scientists who were to give a presentation at the Naval Observatory on a proposed new satellite. He planned his wardrobe, wanting a new tie, shirt, and shoes to go with his pinstriped suit. To get to the meeting he had to drive across downtown D.C. during morning rush hour—a trip of over an hour. He participated in meetings all day and made the presentation, answering several technical

questions. Then he drove home during evening rush hour.

In cognitive terms the energy requirement for his brain to process all that was equivalent to the electricity needed by the power company in the Washington area during a 102 degree day in July. Jim had no brownouts.

About that time, Mathew complained to me, "Mom, Dad is beginning to treat me like I'm a kid who doesn't know anything. He was listening to me for a while, but now he treats me like he did three or four years ago."

I paused before I answered. "Mathew, this is going to sound funny, but in a way that is good news."

"Huh?" he responded.

"Remember how at Christmas time all he talked about were those old guys in West Virginia and he acted like them? It was as if he had no feelings of being a father. That was part of the head trauma."

Mathew nodded slowly in response.

"Then as his brain healed, he acted like a college kid."

He nodded again.

"Well, Mathew, if he is now acting like he did three or four years ago, it shows that healing is still going on. At least he must now have feelings of being a father."

Mathew understood what I was saying. "But, Mom, I'm not going back to what I was three or four years ago. I know what I'm talking about many times that Dad does not give me credit for."

"I'm not telling you to go back. I'm proud of your knowledge, but just understand that part of what we are going through is still his brain healing."

It seemed like each new step in healing involved new complexities in Jim's mind. At the beginning, it was necessary for him to be aware of who and where he was. Then his movement and speech patterns were worked on followed by more complex tasks such as balance and organizing thought processes. By the end

of April we were at the point in healing the psychologists refer to as the executive functions of the mind—those functions that monitor or manage all the processes in the mind.

In late April, Jim could not find his comb. He started searching through his pants pockets. “I wish I could remember where I put things,” he said.

“Jim,” I responded, “I want to congratulate you for not cussing. I appreciate it.”

One night I heard three loud bangs. When I found Jim sitting at the stereo, he laughed and said, “I didn’t cuss.”

When he told me that situations at work upset him, he said, “I could have really blown my stack, but I didn’t.”

“Good for you. You are learning,” I responded.

Thus his mind was able to manage information about a problem, its cause, and his response options, and to control his choice of action.

By late April he began planning for a visit from a group of French scientists. The itinerary included sightseeing for one of the wives and a group dinner at a well-known Maryland inn. His colleagues were surprised at how quickly he acted to firm up the details of the visit. In terms of initiation, one of the highest level executive functions, Jim was showing his old abilities.

In mid-May, Dr. O’Donnell conducted some neuropsychological evaluations to chart the extent of Jim’s healing and to determine if he needed more therapy.

On the way to Annapolis to meet with Dr. O’Donnell about these tests, Jim said to me, “Phyllis, I have so many things I want to do this summer, I don’t think I’m going to have time to go to work.”

I smiled at these words. “Do you remember last summer, Jim, when you told me you had no interest in anything?”

He could not remember that conversation. Now he wanted to learn more about his shortwave radio, research his ancestors, fix up our farm property, visit friends, and many other things.

Dr. O’Donnell was very encouraging about the tests. On the Wechsler Adult Intelligence Scale - Revised, Jim scored a verbal IQ of 142, with a performance score of 122, and a full scale IQ of 137. That was an eleven-point overall gain since his last evaluation in September.

The greatest area of improvement was on the Category Test, which is a measure of inductive reasoning. In September, he scored in the bottom four percent of people taking the test. In May he scored in the top one percent.

Dr. O’Donnell felt such a great improvement indicated Jim’s ability to problem-solve had been suspended rather than lost because of his head trauma and natural healing in his brain had restored it.

Dr. O’Donnell’s summary reads:

“These findings are quite encouraging. Improvement is found in all areas of cognitive functioning with the most important improvement being observed on tests of reasoning and problem-solving ability. Jim is more alert and aware of the environment and his social sensitivity has greatly improved. He continues to evidence mild visual perceptual difficulty, mild verbal learning difficulty, and his speed of cognitive functioning is still slower than pretrauma levels. However, no test score is below average and additional improvement can be expected.”

WHEN BAD THINGS HAPPEN TO PEOPLE WHO'VE HAD HEAD TRAUMA

Before Jim stopped going to Community Rehab in Annapolis in late June 1990, Dr. O'Donnell and Brian counseled both of us repeatedly that someone who has had a head injury will always tire more quickly than he or she would have prior to the injury and that stress will be harder to handle. It was therefore important to pay careful attention to stress and fatigue levels because too much of either could cause the brain to malfunction.

In late June the orthopedic surgeon removed the pin in Jim's hip. The bone had healed well, and there was the possibility the pin would cause arthritis or injury to the hip socket if it were left in. Jim chose to have general anesthesia during the operation, which lasted twice as long as the scheduled forty-five minutes because the bone had healed so well around the screws holding the pin the doctor had difficulty removing them.

After the anesthesia, Jim's stories stretched so long I lost the point before he finished. He had difficulty mastering the use of crutches because he could not keep the process in his working memory. The same thing happened with the cane. The anesthesia had brought back earlier manifestations of his head injury.

A week after Jim's surgery Mathew was driving to the beach when a passing car crossed in front of him. Mathew swerved to the left to avoid it, but his little finger was caught when the rear view mirror where his hand was resting scraped a construction barricade. The doctor woke us at 6:00 A.M. to discuss surgery.

Once again I went to a strange hospital in an emergency. Jim hobbled down the hall of the hospital on crutches to see Mathew.

When Jim had an allergic reaction to the stitches used to sew up his fourteen-inch

incision, I had to cleanse and bandage it daily for a month to prevent a bone infection. I had to do the same for Mathew's hand.

In August Mathew collided with a deer on a rain-slickened road and damaged the front end of the almost-new Escort he had purchased that spring.

In early September, after we waited eighteen months for everyone ahead of us to be taken care of, the well drillers arrived. My shallow well had caused me much grief in the dry years, and I rejoiced that I was going to join the twentieth century with a new deep well.

Two hours after the drilling started, a malfunction in one of the safety features allowed the shaft to be bent. "In eighteen years this has never happened to me before," the operator explained. They drove away with no promise of how soon they could get the part fixed. I was beginning to feel my life was the personification of "anything that can go wrong, will."

A late heat wave hit in September, the kind that hovers close over the area and drains everyone of all energy. The air conditioning in Jim's car had broken, and as he left work the temperature inside it would have been well over a hundred. Driving home took him approximately forty minutes.

The people who share the small blacktop road that leads to our driveway had been using their farm as a depot for their tractor trailer rigs, something not allowed under the zoning regulations for the area. Many times as they pulled out they ran across the edge of our yard leaving deep ridges.

When Jim discovered the new ridges that humid night, he swore in the direction of the neighbors' house in as loud and uninhibited a voice as he would use yelling at a Super Bowl game. He painted a cardboard sign saying "No

More Trucks” and stuck it in the yard. Still not satisfied and unable, because of his head injury combined with heat and exhaustion, to talk out the problem, he built a barricade along the road using tire rims and metal pipe. Just like John Henry, the steeldriving man in the folk song, he pounded four pipes deep in the ground—a danger to anything that hit them, including us if we had to swerve to miss a car. His brain was broadcasting anger, but no messages got back in to tell him to question the wisdom of his actions.

I was exhausted as well as embarrassed. Usually when I reached the point where I could no longer take his actions, I withdrew and released the tension by crying as I had done many times since my visits to the hospital chapel in Pasadena. That evening though I needed to act before Jim built something impossible to tear down and before his anger and exhaustion caused us harm.

There are many ways to say stop and many ways to say the pressure is unbearable, but what came out when I faced him was, “Jim, this has to stop.” When he continued pounding as if he had not heard, I said, “Jim, would you like a divorce?” and walked back to the house.

Jim did not respond. The next morning I explained, “Jim, I am going to take those things down. The county people will be coming to inspect our well, and I don’t want to be cited for an obstruction in the road.”

Again he did not answer. I spent the morning digging the barricade out, causing my shoulders and arms to ache for several days.

Our well was finished a week later.

In the fall Jim continued working full time. Melissa went off to Loyola and had the usual joys and traumas of adjusting to the first year in college while Mathew continued working as an engineer’s aide at Goddard and attended college part time.

The French scientific community planned a celebration to commemorate the twenty-year anniversary of their involvement in

satellite geodesy to be held in February at the Academy of Sciences in Paris. The French Space Agency offered to pay for both Jim and me to attend. In a visit to Washington in November, Michel told us, “We asked what foreigners we should invite, and the unanimous answer was Jim and Phyllis Marsh.”

We planned to go on to Toulouse on February 22, 1991, the second anniversary of Jim’s head injury. Our invitation was a testimony to Jim’s strength of character and an acknowledgment that his contributions to joint French-American cooperation were still that highly respected. Everyone felt he had recovered enough to make the trip.

When I called Dr. O’Donnell to share the news of our trip, I said, “It is almost a fairy-tale ending that on the two-year anniversary of Jim’s injury, we will be in France.”

He agreed. Many times the extent to which a head injury has healed at the two-year mark is a good indication of the extent of full recovery.

Our Christmas celebration was full of excitement for our planned trip. Melissa enjoyed buying us sweaters and travel items, and she commented, “This is the best Christmas we’ve ever had.”

On January 3, the flu struck Jim and me, and back in Iowa my father entered the hospital with a high fever. We felt fine one day only to have no energy the next. I was unable to travel to Iowa.

On Wednesday, January 15, after being unable to reach my mother to tell her I was finally well enough to come, I turned on the news and caught the earliest broadcast of the bombing raids in Iraq.

My father was much worse, and the next night my sister-in-law Sylvia called to say I should come as soon as possible.

Jim supported me in every way. “Go,” he said, “go tomorrow morning.” Because of increased airport security, we had to be at the airport an hour earlier than usual. We got up at 3:00 A.M. so I could catch my flight.

When my father died four days later, Jim arranged for Mathew and Melissa to come later in the week and then flew to Iowa that afternoon. All during his visit he let each member of my family know he cared about them.

But in many ways we were still dealing with his head trauma. The bombing raids continuing each day over Iraq fascinated him. He woke up in the middle of the night and listened on his Sony Walkman.

In my parents' 1910-vintage home with an open staircase and lots of wood, sound bounces around. Thirty people can make a lot of noise, and Jim's mind could not process that comfortably. The executive function that allows the brain to turn off too much stimulation so sleep can come still did not work well in Jim's mind, and he had difficulty sleeping.

Two of my brothers took me aside to express their concern that Jim was not the same as he used to be. "He seems hyper," they said.

Explaining that the last functions to return are those that monitor the mind, I said, "There is still a lot of healing that can take place." I worried, though, about how Jim would handle the stimulation of a trip to Europe.

By the time we returned to Washington, the State Department would not allow government personnel to travel overseas because of the terrorist threat intensified by the war in the Middle East, and our trip was canceled.

Our money situation bothered me. A home equity loan had covered our new roof and well and the hidden expenses of Jim's injury. If Jim had to retire early because of his injury, our savings would have to see us through a long retirement, and I did not want to touch them now. Our credit had reached a limit that I feared to cross.

I had also become a recluse. While I spoke by phone with several friends, I did not feel free to spend money going out. I needed more interaction with people.

It was time for me to return to work. There was an opening at my former job, and February 11 was set as the day for my return.

Saturday, February 9, was a clear sunny day, warm enough to stay outside with just a sweater. Around noon Mathew's friend Carl came by to visit just as Jim was leaving the house to run errands. Carl's parents were dead, and he lived alone in his parents' home. He and I sat at the dining room table discussing the beautiful weather and the animals in our neighbor's fields. Shortly, two brothers, Brent and Chris, came and all three went down to the garage to see Mathew. Brent, Carl, and Mathew had been friends since junior high and had spent many hours working on cars in our garage. When Brent, Chris, and Carl left to run an errand, they asked Mathew to go with them.

"No," he said, "I want to work on my Barracuda."

About an hour later I heard an emergency vehicle go by our house and stop a short distance down the road. Shortly after, Jim returned and said, "Phyllis, I have just seen the most awful sight. A car ran into a tree, and there are three young people dead. I'm sure Mathew and Melissa will know who they are."

When Mathew came up, Jim asked, "Mathew, do you know anyone who drives a car that would have "GT" on the rear bumper. A car smashed into a tree up the road, and that is the only way I could tell what kind it was."

Without answering Mathew ran to his truck to go find out. Returning shortly, his face drained of color, he said, "What can I say, Mom. It's them."

"It's who?" I asked.

"Brent, Chris, and Carl. They're dead, and I can't bring them back."

None of us could speak and we walked away from each other. Later that evening, driving home from the Safeway, I screamed, "No, this can't be," but my cry did not help.

The death of three well-liked young men stunned the community. Immediately calls went out to colleges up and down the East Coast as friends reached out. Melissa called us from Baltimore to ask about the accident before we recovered enough to call her.

In church the next day, I could not stop the tears.

I was unable to start work on Monday.

The volunteer fire department placed three wooden crosses in front of the tree, and flowers, cards, and balloons soon adorned them. Car after car stopped. Everyone wanted to pay tribute and to seek some understanding of how such an event could have happened.

There was standing room only at the funerals. On Valentine's Day, the day Jim and I had been scheduled to leave for France, with flowers and mourners surrounding us, we watched a heart-shaped balloon sway above Chris's casket as the high school principal remembered the two brothers.

Processing this event, with all its anger, grief, and bewilderment, taxed everyone's brain, but for Jim, processing it through an injured brain, it was overwhelming.

"I am so angry, Phyllis," Jim told me, "I don't think I will ever get over it." He looked for anyone and anything to blame it on. "The insurance companies are at fault," he said. "They should not insure those fast cars."

"People are always speeding down our road. Why don't the police patrol it?" he complained.

Focusing anger in personal situations had never been easy for Jim, and I did not know how to help him in this one. If I suggested other ways of looking at things, he felt I was arguing with him.

I was angry, too. "Why couldn't Brent, Chris, and Carl have a full life?" I wondered.

"If such a thing were going to happen," I asked, "why did it have to hit so close?" Carl had come by to ease his loneliness and had left his car in our driveway. Its presence reinforced

our sense of loss as we returned from the funeral homes.

Before the accident, the phone rang five or six times a night with young people calling Mathew. Brent and Carl dropped by often, and their energy and spark lightened my feeling of loneliness. Now the house was silent.

Jim had not recognized Brent, Chris, and Carl or Brent's car. A scene so smashed that three familiar people are unrecognizable would remain etched in anyone's memory. Because releasing what was in his working memory was still harder for Jim, the picture seemed to be seared in his brain. Jim returned day after day to the tree. Our neighbors said they often found him standing across the road staring at it. He relived the approach the car would have taken and drove it slowly trying to understand.

His going and returning from work required passing the tree adorned with new notes and flowers each day.

The ground war in Iraq started. Once again there was round-the-clock news, and Jim tuned in during every waking moment. Unable to shut off all the stimulation, he began losing sleep.

I knew I could not sit at home alone all day and cry, and I was still worried about our money situation. I decided to go back to work.

The call from Pasadena had come on the Wednesday after President's Day in 1989, and by coincidence the day I felt my life was in order enough to go back to work was the Wednesday after President's Day in 1991.

"What a privilege," I thought as I dressed that morning, "to be free to go to work."

In order to spare me a lot of questions about him, Jim suggested he accompany me and thank the people who had remembered us during the two years.

As I walked around the office saying hello, many colleagues asked, "How's your husband?"

"He's right behind me," I responded and introduced Jim. He smiled and shook hands with each of them.

Afterwards, many came to tell me how strong and healthy Jim looked. "It's a miracle, isn't it?" they said.

Since my office was very near Goddard Space Flight Center where Jim worked, we rode together that first day. After work, Jim invited me out to dinner.

"Phyllis," he began as I was finishing my coffee, "I want you to meet someone. After I left you, I didn't go to work today."

To show his concern Jim had wanted to give Mathew something to look forward to and offered to make the down payment on a new truck. While I understood the concern behind Jim's suggestion, I felt that if Mathew were going to invest in car payments over five years, he should take his time deciding what he wanted and how he was going to pay for it. My advice to Jim had been, "Everything I have read, Jim, says not to rush into decisions too quickly following a traumatic event. People often regret things decided too quickly." To myself, I had said, "Where does Jim think the money will come from?"

"I know you told me not to rush into anything," he said as we left the restaurant, "but I went looking for trucks today. I want you to meet the manager of the Ford dealership. He's a really nice guy."

The next day as I was concentrating on learning a new phase of my job, I was called to the front desk for a visitor. Jim was waiting. "Mathew and I have this truck we want you to look at."

I thought Jim had gone to work.

I'm sure the Ford dealership thought if they gave a young man a new truck to drive for the day, he would buy it. Mathew, though, had learned many bargaining techniques over the years, and when the dealership did not meet his price that day, he walked away from it.

"Mom," he asked me that evening, "do you really have the money for the down payment?"

"Well, Mathew," I replied, "it would help if we could wait a couple of months."

"That's O.K., Mom, because I need to pay off my charge card before I make new car payments. I'll wait."

Jim, however, became hooked on buying a new truck. "Phyllis," he said, "our cars are getting old, and we make enough money that we should be able to drive better ones."

Since I drove a 1975 Mercury and Jim's was a 1979, I could not argue about our cars being old. However, both of them had been rebuilt by Mathew and were in good shape.

During Jim's recovery, I had made the financial decisions and sheltered Jim from money problems so he could concentrate his energies on returning to work. Now he could not understand that we needed my salary to catch up on paying the bills before we went into debt for a new car.

"You did a good job while I was sick, Phyllis," he told me when I did not immediately agree to the purchase, "but you don't understand that with our total income, we can afford more."

Those first weeks I sat at work and wondered where Jim was. Sometimes he stopped by Mathew's office to invite him to go look at new trucks. Sometimes when I came home, Jim would have coffee waiting and be dressed in old clothes. Several times as I passed the three crosses in front of the tree and remembered our loss, I looked ahead and saw heavy smoke coming from our yard. Jim had built another fire. The former highly disciplined geophysicist could not concentrate on his job.

We had not worked our way back to the physical closeness we had in our marriage prior to his injury, and at a time when I wanted (and probably Jim did, too) to hold tight to someone strong, we went to bed each night and turned our backs to each other.

When the gulf war ended, Jim started listening to his police radio. The crime-ridden

areas in D.C. always had shootings, robberies, and chases, and if he woke in the night, the radio was like a magnet drawing him. Stimulated by the excitement, he could not go back to sleep.

His stories begin stretching on and on. Mathew could listen only so long, and then he would ask, "What's the point, Dad?"

Finally, Jim was sleeping only a couple of hours a night.

When Jim had spent too much time polishing his 1956 Ford truck the previous year, he listened when I complained because I had not tried to change too much of his behavior. A year later, faced with a much greater challenge, I found that too many problems had been faced for him to listen willingly. When I questioned things now, he turned our discussions into power struggles to show me he was independent.

Finally, his sleeplessness was keeping me from my rest, and I decided I had to save myself before I could help him.

"Jim," I explained, "I can't be up all night listening to the radio and music. I need to keep working, and I need my sleep to do it."

After that, when I went to bed I closed the door to the family room where he sat listening to his radio and music and slept on the sofa.

Jim began looking at Model A ads in the newspaper. At Christmas time we had laughingly made a pact that if he found a Model A Ford truck for \$500, he could buy it. I knew he would never find one at that price.

When his friend Bruce found the parts for a Model A truck for \$500, Jim bought them. They did not add up to a complete truck since there was no engine or cab, but Jim thought I should live up to my bargain.

Two weeks later Bruce found the parts to complete the truck for \$700, and Jim could not pass up the deal. When I explained that our cash was so depleted I was waiting to get our tax refund before I got the septic system fixed, Jim said, "Can I use the rest of it for the truck?"

"Why can't he see," I asked myself, "that if he can buy the parts only after the tax refund comes, we can't afford them?" That payday, in order to have some money in case of an emergency, I put my check in a separate savings account without telling Jim. In twenty-five years of marriage I had never felt the need to do such a thing.

In the face of Brent's, Chris's and Carl's lives being cut so short, Jim seemed to be in a hurry to buy everything he wanted in case the same thing happened to him. For him long-term planning had lost all meaning.

As his sleeplessness continued, Jim began talking about being touched by the hand of God. One morning he presented me with a list he had written in the middle of the night of twenty-four things that had happened which he felt showed he had extraordinary powers of mental perception. Included were beginning a conversation in a restaurant with the man at the next table who had had an interesting early life in Norway and guessing at another restaurant that the man sharing our table worked in a classified defense job because of the way he responded to our casual conversation about what we did. These were enjoyable encounters, but Jim's sleep deprivation colored them brilliant in his mind.

He also announced, "Phyllis, I'm not going to church any more. The minister did not introduce Michel when I asked her to last fall, and I think she's biased against men."

His comment came as a surprise since he had been highly vocal in his support of her.

In my depression and tiredness it did not occur to me to reach out for help. My brother remembers a time when we lived on our grandparents' farm, and Dad had begun working at the Maytag company. When a blizzard came, Dad put on a heavy coat and walked three miles to a nearby town to catch the bus to the factory because he could not afford to miss a day of work. I was walking through my own personal

blizzard, and in my struggle, Jim's strange behavior did not seem much different from the barking dog episodes of the previous year. "This too will pass," I thought.

In mid-March Jim started coming to bed rather than staying in the family room, and the time he slept each night gradually lengthened. At dinner one evening, he announced, "Phyllis, I am going to stop listening to the radio. Once I get started, I can't get it out of my mind, and that's not good."

Together, we agreed to purchase a new truck, and he and Mathew studied the books to find what he wanted. "How soon can we afford to start payments?" he asked me. The first week in May was our target date. In the meantime Mathew spent his money rebuilding his Barracuda and decided not to buy a new truck.

When Melissa came home from college in mid-May, she and Jim talked a lot about her future and a job for the summer. He helped her prepare a resume and encouraged her to take an entry-level secretarial position in a company with many scientific projects because of the future the job promised.

At dinner with one of his colleagues, Jim laughed as he told about calling the fellow patient in Pasadena an old fart and insisting in Montebello he knew Dan Quayle. He had found the humor in this difficult situation.

Twice during May, Mathew, Melissa, Jim and I had dinner at home, and it felt like old times.

Dr. O'Donnell said on many occasions there is now proof the brain continues healing for at least three to five years following an injury. At the end of a little more than two years we had done well and looked forward to a lot more healing.

In late May I had a long talk with the colleague who had sent the letter about Jim's contribution to space geodesy, the letter that had meant so much to me in Pasadena.

"Phyllis, you can quote me on this," he said. "The soul of the old Jim Marsh is still

there, but the new Jim Marsh is more introspective, and to tell the truth, I think I like the new Jim Marsh better."

I asked him if he felt there were changes in Jim in the workplace.

His response was, "Yes, there are changes, but remember, Phyllis, our entire work place has changed. We are older now, and some things don't seem quite as important. Some of us have talked, and we all agree that Jim has fully recovered. We haven't found any deficits. As a matter of fact, I think Jim really has come back 110 percent because of the new understanding that he has. Jim probably has more enthusiasm than some of us who have become burned out."

But his head trauma changed more than Jim.

Rip Van Winkle lives in our folklore as the man who hiked into the mountains and slept for twenty years. When he went to sleep, he was under the rule of King George of England. When he awoke, George Washington was president. At the end of the story the author, Washington Irving, hinted that something other than sleep might have caused Rip's problem: "Some always pretended to doubt the reality of it, and insisted that Rip had been out of his head..."

Head trauma is a Rip Van Winkle experience. While Jim labored at recovery, his family and the world changed, partly as a result of coping with his injury. In addition, change came because life goes on and in two years growth occurs. Mathew and Melissa had become young adults and that freed me to pursue a career and interests of my own.

The other changes were more subtle, and Jim's head injury hindered his ability to comprehend them.

With no warning I had been forced to travel three thousand miles from my support system and deal in rapid succession with a medical crisis, a suicide attempt, and head

trauma. I had decided to talk about Jim's suicide attempt, and I had arranged for Jim to have leg surgery he did not remember having. I had not been able to discuss my experiences with the person who usually shared in all my decisions.

I had survived long months without the companionship and closeness that is the basis for any strong marriage.

I had gained new understanding and respect for my broad knowledge, my analytical skills in judging medical situations, and my psychological health, all of which had been keys to our survival and recovery.

Very few people knew me well enough to give me good odds on recovering the way we did. During the long months of 1989, I remember saying to people who knew me well, "The numbers on Jim are good. To be this far along at this stage indicates he will probably be O.K. in the long run."

In the silence that always followed I could almost hear the voices inside their heads shouting, "Phyllis doesn't know people never recover from head trauma. How can I tell her not to get her hopes up?"

There was no way to convince them I was listening closely to the experts when I said Jim would do well.

Earlier in my life I had set a long-term goal and succeeded in reaching it. I started kindergarten in a rural one-room school a mile and a half from home. My three older brothers and I walked to and from school over rolling Iowa hills in all kinds of weather. Because I was the only kindergarten student, the teacher included me in lessons with the two first-graders. The next summer we moved to town, and I was placed in second grade. As a result I graduated from high school at sixteen.

College was my impossible dream, for I had no money. The Maytag Company Foundation awarded me a full-tuition scholarship to the college of my choice, and Grinnell College came recruiting, offering me a

work program to earn money for room and board.

For twenty hours a week, I was the word processor in the admissions office typing letters to prospective students. I took a full course load. During summers I worked in law offices and at Maytags. By my junior year I showed signs of stress in disturbed sleeping patterns and an inability to relax, but nothing was going to stop me. I had a good time, I made many friends, I got good grades; I look back on college as a positive experience, and I got my B.A. at the age of twenty. The same determination and focus were there throughout Jim's recovery.

After Jim's injury, with all the study I did to understand the way in which the mind functions, I feel I earned a college degree in cognitive therapy. In the same way that sixteen-year-old had been changed by four years of college, I was changed by the advanced course in living required of me.

In many subtle ways I responded differently. When approaching a traffic light that had just changed to yellow and facing the decision to either step on the gas to make it through the intersection on the yellow light or step on the brakes to make sure I had not run a red light, I stepped on the gas. The pre-1989 Phyllis Marsh would have stepped on the brakes.

When the caulking in the shower Mathew and Melissa use needed repairing, the pre-1989 Phyllis Marsh would have asked Jim to fix it and listened to the lectures about how teenagers use too much water taking showers. The new Phyllis asked the man at the hardware store what to use and tackled the job herself.

The pre-1989 Phyllis Marsh was angry at being home alone so much. Now I understood in new ways that life is really time available for use, and staying home alone to accommodate others is applying the brakes while time runs out. I would decide how to use my time.

My interests changed.

Prior to Jim's injury, he had a long list of interests, including his work, old cars, antique guns, music, genealogy, his farm. He had several dislikes—cards, games, TV, shopping. Learning more about my interests was not a priority for him.

Prior to Jim's injury, I enjoyed spending time with him in the pursuit of his interests and accommodating my family. As intellectual pursuits, I liked reading on every topic, crossword puzzles, solitaire. I never really thought about my dislikes.

Jim's injury had not changed his interests. My dealing with Jim's injury and being forced to forego my interests while he was ill changed mine. I wanted to play tournament bridge again. My social studies background and experience as a legislative aide on Capitol Hill in Washington during the 1960s were the result of a deeply held interest in making a contribution to social welfare, and I wanted to become involved again. I wanted to attend plays, travel to Europe, go to the beach, meet new people, enjoy our children as adults. I was bored with old cars, antique guns, and farms. My feelings were not a rejection of Jim, although to him they may have seemed like they were.

I shared my feelings about the difficulties I faced with a friend who has a doctorate in educational psychology and is a professional in the mental health field.

"I have felt for a long time that Jim not only had to recover, he had to grow." I explained. "I am not the same person. I cannot go back to living the way I did before and that will take adjustment on Jim's part."

My friend's response was encouraging. "It has been my experience in dealing with other couples going through such a change that in the long run, if the marriage lasts, and I have no reason to think that yours won't, it is both a liberating and exhilarating change. For both people to drink from full cups adds so much more to life."

Our recovery may have seemed like a miracle to some. When people said as much to me, I may have nodded in agreement, but I always said to myself, "Miracles sure take a lot of work."

Over the years Jim often said to me, "In science things are binary. They are either black or white. One plus one always equals two, and that's the way I like it. In liberal arts, Phyllis, you are always trying to say that one plus one might equal one and a half or three depending on a lot of different things."

When I began this journey, I thought head injuries were binary. Whether Jim recovered or not was black and white. Recovery depended upon the severity of the injury that had occurred and the health care he received in the immediate aftermath. The future would reveal the extent of his injury.

Experience had taught me the severity of the injury was only one factor. There is a binary (or black/white) quality to such injuries, for some leave permanent damage that cannot be repaired. But when I look back, many small things, many as long as a year or more after the injury and some as minor as a carpet on the floor, tallied up to recovery.

A major factor was merely not giving up.

Brian Bemis, Jim's speech therapist at Community Rehab in Annapolis, said it best.

Jim teased him about things being binary. "In my work, Brian, one plus one always equals two. I like it that way. This liberal arts notion that one plus one can sometimes equal one-half and sometimes equal four is hard for a scientist to deal with."

Brian thought for a moment. "Maybe I like it better my way," he responded as he smiled at Jim, "because sometimes we can make one plus one add up to ten."

PROGRESS HURTS

Current statistics indicate there are 2,000,000 head injuries each year, a staggering number.

In late spring Jim and I received notice of a newsletter begun by someone who had a head injury and suffered many losses because of it. She decided to reach out and help others by starting a forum for sharing experiences.

The ad for the newsletter stated, "Of those 2,000,000, eighty percent will lose their jobs, their homes, their savings, their family, and their friends." Jim and I did not know if the statistic was correct, but it was easy to believe because the changes in Jim from the head injury had been so difficult to handle.

When I read the statistic, I accepted it as a compliment that we had succeeded in doing what few people could do. Jim worried he would become one of the 80 percent.

In late May NASA provided Jim a new laptop computer, and I became aware of a new stage of healing as I watched Jim become familiar with its features. Before his injury, Jim had used a Macintosh computer at work for memos and graphics. After the injury he did computer games during therapy but had never tried to use one in his work.

The first night he brought the computer home he could not make it work. Finally, he questioned whether the programs to make it run had been entered correctly. The next day the technician checked it out and agreed they were wrong. The problem was corrected.

The next time Jim brought his new computer home he worked a long time figuring out how to make it print and do the things word processing is supposed to do, such as delete sentences and correct spelling. Since a computer

can only do exactly what you tell it, the user has to be very precise, a difficult task following head injury and a problem for Jim during recovery. Jim puzzled over the commands that had once been so familiar and stuck with it, another difficulty for head injured people, until he mastered it.

Over Memorial Day weekend Jim and a friend went to the farm in West Virginia to leave a truck we were being given to use on the farm. When he returned, Jim told me he felt tired.

When Mathew returned from a two-week trip, he took me aside and said, "Mom, something is wrong with Dad. He's beginning to act like he did before he went to Pasadena. He just stands around and looks at me."

When Jim and I discussed how he was feeling, he again complained he was tired. I suggested he get his thyroid tested to see if his body was absorbing the medication properly. All the tests came back O.K.

Jim had been promoted to the position of staff scientist within his division, and plans were going forward for new offices with new carpeting. Over the years Jim had encouraged young scientists to enter the field, and he would be continuing these efforts on a staff level.

Since returning to work, Jim had done well in relating to his colleagues and working on "people problems" he encountered, but he had never started working on math or science problems. In early June I began hearing concerns about how to get some math work done.

The complaints of feeling tired continued. They came at a bad time for me because menstrual problems resulting in heavy bleeding in early June had left me both tired and concerned that I had a medical problem.

The new healing that opened Jim's mind for more precise thinking and an interest in solving math and science problems also opened his mind to an awareness of his past behavior and of the changes in his thinking.

"Phyllis," he asked me one day, "why did I think I was so smart when I went to Virginia that day and bought that radio? Anyone could have done that. Why didn't I talk it over with you first like we always did?"

In mid-June he went to church again, apologetic to the minister. "I got all bent out of shape by that accident," he explained, "and I'm sorry." That day his affect, or the amount of animation in his face, had brightened almost to what it was prior to his injury.

As the awareness continued, he worried more. "Phyllis, do you remember when we went to West Virginia last year, and you sat in the car all day while I mowed the fields? Then when I wanted to work late and you wanted to come home, I got mad and didn't speak to you all the way home. What made me treat you that way?"

I had difficulty answering Jim's questions. I knew the head injury caused him to behave in those strange ways, but I was afraid in saying that to Jim he would only worry more about how out of control his life was because of his injured brain.

As Jim's mind began registering and judging the behavior the head injury had caused, he became more tired. Depression often occurs in this stage of healing from a head injury because as the brain begins new monitoring of its functions, there is a new awareness of the losses caused by the injury.

Jim's blood pressure had been borderline high at times, and he stopped by the health unit at work to have it checked two or three times in June. It registered high enough to cause us concern that he should be on blood pressure medicine.

Working back into the math and science was causing Jim difficulties. He wanted to do more but seemed unsure about how to direct the

programmers and to provide the leadership he remembered providing before.

On Father's Day Melissa and I gave Jim cards at dinner. Mathew had spent the night with some friends and had not come home for Sunday dinner. Jim worried that the way he had treated Mathew had turned Mathew away. In the afternoon, Mathew called and asked to speak to him.

"I just want to wish you happy Father's Day, Dad," he said.

That night Jim took Mathew aside and said, "Mathew, it really meant a lot to me that you called. I realize I haven't been myself, and I'm sorry." Tears came to Jim's eyes as he spoke.

"You don't need to thank me or apologize," Mathew responded. "I wanted to call because you're worth it."

On Wednesday of the following week, we had a message on our answering machine from the husband of Jim's sister. "I am calling," he said, "to let you know that Diane is in very serious condition." She had been battling breast cancer for over seven years. As it metastasized to her bones and brain, she fought back with surgery, radiation, and chemotherapy but now her kidneys had failed. On Friday she died at the age of forty-seven.

We waited a day before leaving for the funeral, a day of reflection for Jim. "Poor Diane," he said. "I remember the day she was born."

Jim did not say much more that day about his sister. I remember that the death of my brother had brought back many feelings from my childhood—of happy times, of vulnerable times, and of times when all dreams of the future seemed possible—and I can only imagine that Jim was thinking that day of his parents and the hopes and dreams of his family. If that was so, these reflections came at a time in Jim's healing when he was very vulnerable.

Jim and I drove to West Virginia in our new Ford Ranger. About half an hour after we left, he said, "Phyllis, you are going to have to

drive because I'm too tired and I'm not very alert." Driving for the next six hours exhausted me.

Diane was the first cousin among eighteen to die. Growing up the cousins had spent most holidays and Sundays together at their grandparents' home. Many came to the funeral.

As Jim was growing up, his family had struggled to provide a living on a small farm. There was little money, and there were several hardships, such as his father's heart attack at the age of fifty. His parents were very hard workers and proud of their heritage. Jim's early dreams were of accomplishing things in the world outside the farm that would be a source of pride to his family. When he went back to his sister's funeral, seeing many family members for the first time since his attempted suicide, the reality of his present situation was so far from his dreams he felt he had failed.

Jim compared himself to his family. "Walt has done so well. He seems to have a lot of good ideas and really gets things done," he told me.

When new feelings come back following head injury, they come back stronger until the brain learns to monitor them. Jim's brain was overwhelmed by these new feelings and did not recognize the good feelings he could have had of his accomplishments.

Each of his family told Jim how much he or she cared, but his responses remained subdued.

Coming back, I again had to drive the whole way because Jim was too tired and felt unable to cope. All the way Jim talked about how everyone was so much better than he was. The head injury, which made it harder for Jim to change subjects, probably made it harder for him to stop judging himself.

I first felt anger. "How can this be?" I asked myself. "After all I've done, why do I have to be hit with more?" I did not know where I would find the reserve of energy to deal with this.

When Mathew returned, he took me aside. "Mom," he lectured, "you need to take Dad to the doctor. He is not acting right, and he might do something to himself like he did in Pasadena."

I realized Mathew was right.

The Motor Vehicle Administration required that Jim have one final medical examination before clearing his driving record. He had already made an appointment to see Dr. Gray in Baltimore to meet this requirement. Dr. Gray now worked at the Head Trauma Unit at Montebello and had seen Jim several times in follow-up appointments.

"Jim," I said, "let me drive you on Thursday to Baltimore. We need to be honest with Dr. Gray about what is happening and see if there is some medication that can help you."

My established rule of survival was to listen to the expert in the field who knows us. Dr. Gray satisfied that rule on both counts. I also told Jim to call Dr. O'Donnell and make an appointment to see him. Dr. O'Donnell agreed to meet with Jim the day after Jim saw Dr. Gray.

I dropped Jim off at Goddard and picked him up for both appointments so I could go on to work and know he had no transportation to go anywhere.

Several times during the trips he said, "Maybe I can retire on disability."

"I am not sure anyone would certify you as being disabled," I responded, unable to hear in his words the deep concern he had for the future and unable to suddenly give up my hopes for a return to normalcy.

At Dr. Gray's office, I accompanied Jim to the examining room to make sure we told Dr. Gray everything we had been dealing with.

Dr. Gray questioned Jim extensively about his feelings and whether Jim had any feelings of suicide. Jim hedged a little on his answers, but Dr. Gray probed further. "Have you considered how you might do this?" he asked. At that point I left the room because I wanted Jim to answer honestly and felt he would

do so more easily if I were not there. I did not hear his answer.

Before prescribing medication, Dr. Gray sent Jim for blood tests and an EKG, which showed a slight abnormality in Jim's heart beat.

There are two classes of anti-depressants, and the kind Dr. Gray wanted to put Jim on in order to help him sleep should not be used when the EKG reads as Jim's did unless a cardiologist clears it. Therefore, Dr. Gray prescribed Prozac, which would not have the same sedative effects.

"Some people have claimed that Prozac causes suicidal tendencies," Dr. Gray told us. "I have never found that in my work. It has been one of the most successful anti-depressants for the patients I have treated."

"However," he cautioned us, "if you begin feeling suicidal, remember you can go to any emergency room and tell them how you are feeling and they will provide care for you."

His final words were, "You will be able to recover from this. I have had many patients who have felt this way and gotten better. It just takes time. The medicine will not take effect for at least a couple of weeks. Be sure to call if you have any problems."

Dr. O'Donnell met with Jim for about an hour late on Friday afternoon. I left them alone, but afterwards Dr. O'Donnell told me he had first given Jim some cognitive tests to see if there had been any new injury or problem. Jim scored about where he did the previous year.

"I told Jim," Dr. O'Donnell said to me, "that as hard as it is to understand, some of these feelings he is having are signs of recovery. I had a patient whose father died and the patient said he understood his father's death, but he had no feelings about it. The fact that Jim feels some of these things is a good sign."

He went on to say, "Many times at this point in recovery there are feelings of depression as a person realizes there are changes in the brain. But I told Jim he could recover and to factor in time to let things heal."

We were provided with several emergency numbers we could call if we needed help.

The division staff at Jim's work had scheduled a planning retreat to begin Sunday evening in Virginia. Jim looked forward to taking his position on the staff, but because of his depression and feelings of vulnerability, I was apprehensive about his going. My wish that I had told him to cancel going to the meeting in Pasadena reinforced my instinct that he should not go to this one.

On Saturday morning, I told him, "Jim, I really don't think you should go. You are not feeling well, and monitoring a new medication is a legitimate reason for not going out of town. The staff will understand. There will be other times you can go."

He became further upset that he was not up to going.

The weather had turned very hot and humid. Normally Jim spent time on Saturday working in the garage or yard, but he had no energy for it in the heat. He began putting in our window air conditioners, all the while repeating, "Are you sure we should put these in? Somebody could just push them in and get in the house."

Melissa and I both told him, "Don't worry about it. If anybody wants to get in, they are not going to worry about a heavy air conditioner. They are just going to break a window."

I asked him to go for a ride with me, but he did not want to leave the house. "You go," he said.

"No, I'll just stay here," I answered.

"You're not going to leave me alone in the house, are you?" he asked.

"No, I'm not," I responded.

The look on his face said he knew I was afraid he might do something to himself.

There were several guns in the basement under double lock so they would not be stolen. As a precaution, I moved the keys so Jim could

not find them, forgetting one gun that was hidden upstairs.

As the day progressed, Jim became more agitated. "Why did we buy that truck?" he asked. "We can't afford it. We're just going to end up bums on the street."

I tried to soothe him. "Jim, we have lived frugally. We still have our savings, and you have a good retirement coming. We are not going to go broke." My message did not register in his mind.

"I bet you are really sorry you ever met me," he told me.

My mouth fell open. "How could you think that?" I asked. Not sure of what to say, I continued, "Just look at the two beautiful children you and I raised together."

"Phyllis, remember, you asked me for a divorce. I have never forgotten the night you said that."

I had no response. We had never discussed what I had said when I had been pushed to the breaking point. His mentioning it at this point startled me. I could not deny saying it, but to tell him I had said it because of the difficulties encountered in dealing with his head injury would only have emphasized his injuries and the odd behaviors it had caused when his worry about those very things was overwhelming to him.

"Remember that article said that 80 percent of the people with head injuries lose everything," he told me.

Jim always had difficulty handling feelings of a perceived failure on his part. I remember a time when my parents were visiting us, and I drove them in Jim's car to see my cousin. As we were leaving to come home, the muffler fell to the ground, and I had to call Jim to pick us up. My parents took the attitude that something like that could happen to anybody, but Jim was embarrassed. "I don't usually let things like this happen," he had told them.

There was no program in his brain for handling such feelings of failure prior to his head injury, and consequently, there was none there to call upon to handle the feelings of failure he was experiencing now. As a person who likes things to be binary, either good or bad, he judged himself bad.

When we went to bed that evening, we left the newly installed window air conditioner running. The unfamiliar hum disturbed my sleep, but the oppressive heat would have disturbed it even more. The sound disturbed Jim as well.

As we went to bed, I wanted to hug Jim and tell him that things would improve, but my sense of estrangement was too great. I dropped off to sleep and awoke when Jim got up around 12:30 A.M. to go out into the living room.

"I don't want him to have to face the night alone," I thought, so I got up to visit with him. First, though I had to go to the bathroom. Passing by the bedroom window, I saw car lights on our back road and waited for the car to pull into our driveway to be assured that Mathew was coming home before I walked on into the bathroom.

While there, I heard the shot with which Jim ended his life.

NO ONE REMEMBERS ROCKY DID NOT WIN THE FIGHT

At Jim's funeral, we celebrated the good life Jim had rather than mourn the shortness of it. One of his supervisors talked of Jim's considerable accomplishments in the field of satellite geodesy. Steve Klosko, who helped me so much in Pasadena, shared experiences from eighteen years of working with Jim, and my brother Kenneth talked of happy family times.

When the minister asked if others wished to share any memories, several people spoke.

At the luncheon at our church following the service, several people said to me, "You have to remember this about Jim," and then recalled a particularly meaningful experience. Others said, "I dreaded coming today, but I feel so much better now. I will really miss Jim." As I went around the room, I felt an openness and warmth among the people there.

When I spoke to Steve about the positive feelings that were there, he commented, in reference to the movie about the fighter, "No one remembers Rocky did not win the fight."

In the following days many people told me how much Jim had helped them, particularly in the last six months of his life.

The parents of the two brothers who were killed in the car accident did not know Jim prior to the car accident, and thus did not know Jim prior to his head injury. Jim had visited with them at the tree several times and planted flowers in front of the crosses. "He was the kindest, most thoughtful man," they told me over and over.

Our minister said, "I really liked Jim. I know I did not know him as he was before he was injured, but I often think of things he said to me about friendship."

A sympathy card from a colleague said, "Over the last year Jim has been a constant source of support for me at Goddard, and I have

always appreciated his guidance and words of wisdom."

These comments gave me new respect for Jim and the tremendous effort he had put forth in trying to overcome his injury. I came to realize in new ways that Jim had still been a person of great worth who could reach out and help others, even though he was not the same person I knew before. In coping with all the changes in my life since his head injury, I had been too wounded to understand some of the very positive things others were seeing.

Two and a half years after Jim's injury the healing process was not complete in either Jim or me. We had come so far in our struggle, farther than anyone could have expected or predicted, but there was still injury—in Jim's brain, in each of our souls, and in our marriage relationship.

As Mathew, Melissa, and I mourned for Jim, we talked often of the events of the past, events both before and after Jim's head injury. In sorting through those memories, we realized the depth of the love that was the basis for our family, and we healed.

Within that healing, though, I will always wonder what would have happened in our lives and our marriage had Jim had time to heal with us.

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13. ABSTRACT (Maximum 200 words) <i>Building Satellites</i> is a story about Jim Marsh's recovery from a severe head injury told by his wife Phyllis from the moment she learned of its happening, through the ups and downs of a lengthy rehabilitation, until his return to work and daily living. It continues on, however, and narrates his battle with the more insidious Graves' disease. Told in the first person, <i>Building Satellites</i> vividly portrays Phyllis's thoughts and feelings throughout this experience with scrupulous honesty. This is a story worth reading for many reasons. First of all, Jim was an accomplished scientist, respected by his colleagues both in this country and abroad. Secondly, it narrates the many stages of his recovery from head injury with detailed, readable accuracy; it informs us as well as inspires. Finally, <i>Building Satellites</i> also tells us the story of Phyllis Marsh's remarkable, creative response to this crisis. It narrates her personal experiences as she progresses through the strange and sometimes bizarre world of medicine and rehabilitation, guided by a few basic beliefs, which she learned as a child in Iowa, that provided her with the strength to endure. <i>Building Satellites</i> seems to reaffirm our unconscious, but settled conviction, that when confronted overnight with adversity, we are somehow given the means for coping, supported by our basic beliefs, strengthened by family and friends, and eventually learning to accept any outcome.			
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