

PSYCHOTHERAPY OUT OF BOUNDS

(or Presumptuousness of a Psychotherapist Made Preposterous)

by

Felicity Alice Constance True

To our alleged patients

Acknowledgement is gratefully made of the editorial help generously given by Judy Bridge who, in the face of all reason, judgement and odds, tried to make this patently fictional material believable, plausible, sensible and possibly comprehensible. Her heroic efforts were doomed from...the start.

PREFACE

I know you know that psychotherapy is a terribly serious and expensive enterprise, that it delves painfully into the deep unconscious horrors which drive people crazy, and that the person who needs it most is "the other guy" -- although you may sometimes wonder about yourself. I know you know that one of the problems encountered with psychotherapists is that they use their own language which nobody understands. Have you ever wondered if it's just to hide the fact that they don't know what they're talking about? If they did, you'd think they'd realize that what they do is meaningless since it's obvious that you can't have a scientific enterprise whose subject matter is ephemeral behaviour governed by an individual's free will.

Actually, psychotherapy can be terrific fun for all concerned. It can be quite inexpensive. It can ignore the unconscious -- if that exists in the form in which most people think of it. It does address pains, but mostly to get rid of them. Almost nobody has to become a crook or an addict. Almost everybody can benefit from psychotherapy. It's just a way to provide relevant assistance to solve resistant problems which don't yield to help from friends, clergy or physicians. It's true that, as in any enterprise, there are some practitioners who don't know which side is up (or out). But the use of specialized languages is intended to create greater precision than could be achieved using the often ambiguous and non-referential words of everyday language. And it sometimes happens that adopting the language helps treatment. Finally, you can make science of Psychology and of psychotherapy, even acknowledging free

will. Some of the bases for these statements should become clearer as you make your way through the text.

But why bother saying all this? Partly it's to pique your interest. Partly it's to question some common stereotypical misconceptions about psychotherapy, some of which may be due to exposure to inadequately trained therapists. Partly it's intended to explain why Psychologise is used at times in this volume in addition to English. Partly it's to create confusion with contradictory statements -- uncertainty is necessary if new learning or understanding is to take place. And finally it's because a book is supposed to have a preface, whose purpose is to mislead you into thinking you know what the volume is about. So let's mislead you in the usual way. This volume seeks to offer some solid information about psychotherapy, disguised as light-hearted science fiction, carried out by an odd psychotherapist trying to solve psychological mysteries of crime and addiction as if he was a defective on the police farce.

This paragraph is intended to pursue the fourth purpose listed in the last paragraph. ... If the foregoing failed to pique your interest, this preface has succeeded in doing what, in my view, prefaces usually do. If it captured your interest, and thus failed to succeed-by-failing, perhaps you read the wrong preface. The real Preface to this work is the Introduction. So maybe you should read it. If you don't, you will have helped to make this preface a success in being the failure prefaces are supposed to be. And you will, willy nilly, have contributed to creating this volume -- and you wouldn't want to have that held against you, would you?

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INTRODUCTION

Funny Things Funny People Do

Whenever I meet someone, it seems only proper to introduce myself before I expect the other person to divulge much about him or her self. As you read and react in your own special way to each of the stories about which I plan to gossip, it seems likely that you will reveal a good deal about yourself -- to yourself. So it seems only right that I should begin by telling you something about myself and about the rather improbable protagonist in this set of mystery stories. Bear with me while I do that.

I am the protagonist's spouse. Since the protagonist's name is Felicity, you might expect me to be her husband. Actually, I'm his wife. What makes it more confusing is that we both have the same name. That's right, I came equipped with the same given names as he did. Now that is an unlikely coincidence. I wonder what the probabilities are that two people, each with three given names which are the same, would meet and marry. Can you imagine how strange it feels to greet your spouse with: "Felicitations, Felicity" and to hear the echo come back: "Felicitations, Felicity?" Well, that's what it's like at our house.

Like most people I know, Felicity was born some years before he grew up. If you wonder how many years it has been since he was born, the answer depends on who you are. Everything is relative. If you happen to be a client, you will want him to be and to look older than he is and does not -- which, of course, he is and does not. If you are not a client and you are male, he would state with conviction that he is older than he looks. If you are not a client

and you are female, he would state with certainty that he seems older than he is. And if you are none of the above, with as much assurance as I have about your identity, he would affirm with a definite maybe that he is every bit as old as he should be. One thing is sure. By western standards, he was born on a truly auspicious date, namely, 7/11. Of course, if you're American, this means he was born in July; whereas, if you're British, it means he was born in November. It seems only right that you should be yourself, even if you are none of the above.

When he was born, he was named. Although we could dispense with it, in case you were wondering how he got his name, let's get that unpleasantness out of the way. His mother had a number of character traits which endeared her to nobody. In particular, three of her traits left Felicity just plain cold. These were her impatience, her assurance that if she had even a passing thought it was bound to be absolutely true (probably justified to her by her acquired surname), and her insistence that nothing interfere with the serenity of her life. That's how he got his name.

During the entire time of her 'confinement', his mother was absolutely convinced that Felicity was a girl. Not even his wizened, prune-like appearance when he emerged and his extra little gizmo could shake her unflinching belief. Of course, having decided on his gender in advance, her impatience demanded that he be named long before birth. That's how he got girl's names. I suppose it was to ensure that he got the message to behave himself, and not to upset her in any way, that she dubbed him Felicity. She added the other names out of spite, to get back at him for having failed to

be a girl. Alice and Connie were his two, much despised, spinster aunts. Their dislike for his aunts Alice and Connie was the only subject on which his parents and he were ever known to agree.

Of course, his initials did help to shape his destiny. It was inevitable he'd become a physicist or an engineer. So, naturally, he became a psychologist. And, naturally again, being destined for a career in the 'hard' sciences, he became a psychotherapist.

How that came about is easy to understand. I don't know about you, but Felicity hated school. But he hated the thought of having to work even more. So, upon completing high school, he found an expedient way to postpone the need for the employment market to find suitable work for him. He registered in university. Then he was faced with another problem. He was chronically confused about who or what he was. So he had no idea which of the available courses of study to pursue. Providentially, to support the indecision of the indecisive, the university had an entry programme in Arts which served as the first year for a host of disciplines. He enrolled in this entry programme and chose courses with the help of a dart board and a set of dice -- he never did figure out how to get a die to stick to a dart board. One of the courses he carefully selected by these means was Psychology. It was in this course that he found the discipline most suited to his nature.

As he explains it, he had learned everything he cared to know about health in high school, where he was taught an assortment of useful things such as: 'Flies spread disease; keep yours closed'. Now, only in his first year at university, he was taught the rest

of what he felt he needed to know -- that 'Psychology is the study of the id by the odd'. Although he had attended the world's most advertised school (you know, everywhere you go you see its sign: 'Slow School'), he was quick enough to see at once the discipline he was destined to follow. It occurred to him in the twinkling of an eye (or the twitch of an ear) that he would someday be doing, in his own odd way, the funny things with the id that those funny psychologist people do.

In the course of a long career, replete with improbable experiences, he encountered many strange events and a great many wonderful people. Most of these people managed to effect almost miraculous changes in themselves during the time in which they allowed him the privilege of peeping into their lives. Of course, he never had the slightest idea about how they performed their feats. But, because they impressed him so much, it always distressed him that their accomplishments could not be shared with others. Unfortunately, nobody would believe most of the stories he could tell about these people, even if they were recounted face to face, and even if the listeners were the closest of friends. So he had resigned himself to the fact that these improbable events were never to be recorded.

However, a friend and colleague, who was also enamoured of the tales, and who was concerned lest Felicity's final breath be drawn without some of these fanciful stories seeing the light of day, concocted with conviction the original form of the Principle of Perversity (Felicitations, 1980, 1, 1, 1-2). He pointed out that, human nature being what it is, it is much easier to believe that

which is presented as patently fictitious than it is to believe that which is presented as fact. Why not, he suggested, write up the cases as the pure fiction they clearly are, uncluttered with Felicity's usual attempts to make them sound plausible? Then everybody could believe them. He added that if Felicity felt it necessary to expound profound truisms and assorted meaningless justifications about what was purported to have taken place, or about how the effects noted might be explained, he might choose to expand at length on the tales in a companion work. In this way, it would be possible to make reading about psychotherapy tolerable, even fun, while at the same time introducing students to the demanding discipline of psychotherapy with the least possible pain.

Accordingly, this is one of a pair of improbable works of fiction. This one contains yarns about people who never existed, identified by their real fictitious names. Of course it must follow that any resemblance between these people and anybody living or dead, or even eventually to be alive or dead, is purely and completely accidental and unintentional. The companion work, aptly entitled A Companion's Work, containing all the associated clutter of irrelevant thoughts, unlikely schemes and fantastic fictional and pseudo-scientific explanations, all expressed in the pedantic and mind-destroying forms of non-communication commonly used by psychologists, you will be happy to hear, is not going to be written. You may be less happy to hear that its contents are contained instead -- I hesitate to say this -- under the covers of this volume, although frequently in chapter introductions.

By now, the fact that one aim of this work is to formulate psychotherapy fiction under the guise of science must have been only modestly obscured. Of course, everybody knows that science is a process by which statements (called hypotheses or theories) are tested for their truth or validity. Although normally based upon fairly firm grounds (usually stated in a scientific report), an 'hypothesis' is a guess, the truth or validity of which is to be tested in an experiment. The hypo-thesis is a little thesis or a sub-complete (less than complete) theory. As the statement or little theory to be tested in any experiment, the hypothesis is the central and organizing idea which selects what is to be tried out. What marks these stories as being beyond the fringe (or off the wall) is not only their manifestly fictional character, but also the fact that the hypotheses tested are often perhaps a trifle unusual. They sometimes even get to be quite strange.

Also, in experimental tests of hypotheses, a plurality of individuals or observations is usually included in order to avoid the pitfall of drawing a mistaken conclusion due to chance peculiarities of one particular individual or observation. In clinical work, it may be impractical to employ more than one case in a given experiment. So it is accepted practice to do 'single case' studies. However, when single case methods are used, it is considered inappropriate to draw widely generalized conclusions from them referring to whole populations of events or people. For this reason, where convenient, two or more case stories are fabricated here to illustrate the possibility that the conclusions dreamed up may be suitable for generalization to large populations.

How's that for a way to get around a methodological problem!?

Incidentally, while reading these stories, you may wonder why a loving wife (which I am) could offer the 'put downs' of her husband contained in some of these pages. I have simply recorded the stories in the ways in which Felicity told them to me. He has a funny way of speaking about himself, as though he was embarrassed about talking well of himself. Since I found his ways of referring to himself to be funny, I have recorded them here in the hope that you will be able to enter in the light-hearted banter too.

Finally, may I add a note of welcome to these pages. I would invite those, such as yourself, possessed of virtue, integrity, honesty, calculated scientific reserve and tutored critical faculty, to explore these pages. A little harmless fiction never hurt anyone. It might even poke a few holes in the blinkers with which we all restrict and fashion the world to fit our own pre-conceptions. What you will find here is a set of mystery stories in which hypothetical solutions are generated and examined through treatment outcomes to provide means by which one rather peculiar psychologist might create imaginary structure for himself to help him cope -- you may think in a crazy way -- in the confusing enterprise of trying to help people to fix their deformed or broken worlds through psychotherapy.

Felicity Alice Constance True 0-I-X (you pick the number*)

* (This is the only footnote.) "O" stands for hugs. "X" stands for kisses. "I" won't stand for any of that sort of stuff. "I" prefer "/" to "__" recline. But enjoy the rest, footnote-and-fancy-free.

Chapter 12

Physiological Anxiety -- Psychosomatic Dis-ease

Introduction -- Impossible Possibilities

Here's where you can really get confused and have lots of fun. There are so many varieties of this sort of problem that it is hard to know where to start. In this set of tales any old order has been adopted to talk about a range of possible events. The main thing to note is that the types of health problems addressed are likely to stretch your credulity almost to the limit (the stories about madness will stretch it to the limit, and some stories after that will go beyond the limit). But buck up, don't let your fancy flag -- remember that all of this is pure fiction.

Let's start by being entertained at Felicity's expense. He's a pretty strange bird with his own problems -- which, of course, he will try to blame on everybody else.

An Out-Grown In-Grown

In-grown toe-nails? That's right, Felicity had to suffer from that indignity. I know, in-grown toe-nails have almost nothing to do with psychotherapy. But the story may have something to say.

One day Felicity was limping around work. A friend asked him what was wrong. He complained about his in-grown toe-nail. His friend suggested he consult her podiatrist. He did so. The podiatrist examined the toe and said: "Yup, in-grown toe-nail."

When asked what he could do for it, the podiatrist said he would remove half the toe-nail and hope it would grow back in straight.

That sounded to Felicity like surgery. So he went to see his physician to inquire about podiatrists as Felicity knew nothing about them. His physician told him to stay away from podiatrists -- they were quacks (which, of course, only means a non-physician). He looked at the toe and said, "Yup, in-grown toe-nail," and referred Felicity on to a surgeon friend of his.

Felicity consulted the surgeon. He looked at it and said, "Yup, in-grown toe-nail." But he did add something helpful. He said it was a 'clubbed' toe-nail. Felicity asked him what that meant. He said that the toe-nail had become thick so it wouldn't lie flat any more. Felicity asked what he could do about it. The surgeon said there was only one thing to do about it. He would have to remove the entire toe-nail back behind the root so that it would never grow again -- as it would just grow back in clubbed. Felicity looked appalled and suggested the ground would be awfully uncomfortable. The surgeon agreed: "Oh, you can't leave it like that. I would cover it with skin." Felicity asked where he would get the skin from, his bum? The surgeon said: "Oh no, it's got to be skin from the end of the toe." Felicity was dubious: "There isn't enough skin there -- it won't stretch." "Oh, I know that," the surgeon smiled, "I'll have to cut off a bit of the bone to shorten the toe to get enough skin to wrap over it." "You want to do what!?" Felicity reacted, "Then I won't be able to get shoes to fit and I'll be lop-sided for the rest of my life." The surgeon shrugged with apparent indifference.

Thoroughly amused by the barbaric ideas of this strange surgeon, Felicity returned to his physician to share the joke with him. The physician listened to Felicity's light-hearted account of his visit to the surgeon. Then the physician affirmed that the surgeon had been right, and that such was the 'conventional medical practice' concerning in-grown toe-nails.

Now Felicity had had enough experience with physicians to know that the phrase 'conventional medical practice' is a hallowed one in medicine. It, not science, is the physician's final 'court of appeal'. Anything, other than what physicians in common are taught, is considered improper and, worse, sheer quackery. Felicity left, shaking his head and mumbling: "Quack, quack, quack!" Parenthetically, the word 'quack' is always used to refer to one whose point of view you do not share -- unless the user is one duck speaking to another.

The next day, Felicity was talking with his psychologist friend -- the one who had first stated the Principle of Perversity (Introduction). Felicity was laughing about his experience. His friend looked at Felicity thoughtfully. "If the problem is that the toe-nail is too thick," he said, "why not make it thinner with a nail-file?" (That sentence was the psychotherapy in this case.)

Felicity stopped laughing. went to the store and bought himself a nail-file. He filed the surface of the offending toe-nail until it became a bit thinner. The next day he was gratified to notice that the toe-nail was now lying flat and was no longer in-grown. But that's not the end of the story.

A while later, Felicity was in a hospital for observation. He

over-heard two nurses talking. One said, "I see Mrs. Jones is back in the hospital again. She was in just a while ago for the in-grown toe-nail surgery, wasn't she?" The other replied, "Yes, now she's in for gangrene in that foot." Felicity was shocked. For want of a nail-file, the foot was lost!

An If It Is Id ...

But psychotherapy does have greater relevance to Felicity's own life, if not to his in-grown toe-nail. In fact, Felicity has put himself through and has been put through psychotherapy quite a few times during his career. A couple of these experiences are relevant to the topics in this volume. One of them might be entertaining at this point. But first, what is this section about?

This small section might have been titled after one of the Songs of Couch and Consultation: 'Shrinker man, shrinker man, set me right if you can. Free me of my tics and twitches, disconnect my latent switches, shrinker man'. It almost wasn't. A title that long wouldn't fit on the one line it would be granted. The title aside, this section has to do with muscle anomalies.

Some people like to knit. Others like to watch sports. Felicity likes to type. Of course, since his fingers don't coordinate like any normal person's, so that he has never been able to learn to play the piano or type with all his fingers, he types using the 'pick-and-peck' method. One finger of his right hand types, while he uses two fingers of his left hand, one for the space bar and one for the shift key. In spite of the awkwardness of this method, he has worked his speed up until his right hand

flies all over the keyboard at a seemly rate.

Now we get to the place where he blames everybody else for his own difficulties. The trouble is that whoever invented the keyboard put the 'i' at one side of the keyboard and the commonly associated 'd', 'f', 's' and 't' at the other side. Felicity used to complain that his left hand on the space and shift keys got in the way of his quick-draw right hand. Although there is probably another explanation for it, his problem was that if, for example, he wanted to type: 'if it is id ...', he would end up typing 'id id id id ...' Then he would be embarrassed if he didn't notice the error -- his embarrassment probably revealing the real motivation underlying the typing error.

Well, he finally decided he had to do something about this embarrassing error. So he spent a great deal of time at his favourite pursuit in front of the typewriter consciously typing: 'id id id id', as though he was pretending to type 'if it is id'. There was probably another reason for doing this exercise, though you may be sure he wouldn't admit to it. Eventually, he achieved two effects from this 'psychotherapy'. First, he was finally able to type 'if it is id' accurately -- to his relief, joy and immense pride. Second, his sex drive, which was never very high, declined somewhat. But so much for personal revelations for now. Onwards to the interesting stuff.

An Idealistic Tic

Passionato was a sitarist (the sitar is an Indian guitar) of some renown in the area of India where he lived. He was seen at a

clinic where Felicity was working as part of an assignment with the World Health Organization (WHO? World Health Organization, that's WHO). Actually, Felicity went to India in order to make sure the place really existed. He considered it possible that India might be just a figment of Rimsky Korsakow's fertile imagination. Does it exist? It does. Of course, that's just another affirmation in this book of lies. So, if you want to check out Rimsky Korsakow's allegations in the Song of India, you'll have to take the trip yourself. Incidentally, this is not the same Korsakoff whose drinking habits made him enough renowned in medical circles that a condition was named after him. The latter's first name, in contrast to the former's last name, seems to be a matter of complete indifference to most people.

Anyway, Passionato was a sitarist who played beautifully at one time, but would not perform any more. The problem was that his playing arms (those were the arms with which he played, and not any other arms he might have possessed) hurt too much. Felicity was shown a taut band of muscle running down the inside of each forearm. It looked liked a tightened sitar string running just under the skin. It was chronically tight and terribly painful in spite of his many efforts, on his own and with help, to relax these painful impediments to his ability to give pleasure to others. Felicity was being asked what could be done to treat this malady.

Have you ever tried to conduct psychotherapy through an interpreter? Well, don't. It's hard. But it's interesting. Even Felicity noticed a couple of things about this man. The first thing he noticed was that Passionato's sad face had a 'set' about

it which involved some tense angularity of the line of his jaw. Felicity had seen that angularity (in place of a smooth curve) of the jaw line before in both homosexuals and obsessives. It seemed to his untutored eye that the angle was formed by chronic tension of the jaw muscles, as if the person was chronically clenching his teeth. At first, that reminded Felicity to think about the common apparent association between homosexuality and the selection of the performing arts as a vocation. But then he remembered the same morphology (look of the body) in non-homosexual obsessives. He remembered that what they often have in common is a certain level of unexpressed anger -- although they often think of the targets of their anger quite differently. That reminded Felicity that people who are tensely angry often talk through clenched teeth as if to try to prevent opening their mouths and getting really mad.

The second thing Felicity noticed came from the interpreter. During the initial conversation together, while Felicity and Passionato were becoming acquainted, the interpreter rendered what Passionato said on three occasions using the English word 'contaminate'. Now this word is rather rarely used in ordinary social conversation. Felicity had heard that word used much more frequently by obsessives than by any other group of people. Consequently, the second time it was used by the interpreter, Felicity stopped him and asked him the Tamil word for 'contaminate' that Passionato had used. The interpreter gave a word. Felicity asked what the literal English translation of that word was. The interpreter was clear that it meant 'contaminate'. Later, just to confirm that the obsessive pathology did not belong to the

interpreter, Felicity asked a couple of other Indian friends what the Tamil word meant. They agreed it meant 'contaminate'. Now Felicity was really interested. Could it be that something in a particular psychological habit system could result in a kind of idea which is common across cultures, and which results in a common word usage to express the idea regardless of the language used? Who knows? Felicity doesn't.

Felicity wondered if there were two interacting processes going on to maintain this man's muscle symptom. Could he have developed self-doubts about the perfection of his playing, or have felt resentment that his work wasn't appreciated enough, so that he was frustrated or angry enough to resist performing? And could he be trying too hard to relax as a way of 'fighting off' any anger or frustration he might be feeling -- to keep his feelings under control? Both ideas would tend to fit with how obsessives react. Of course, these 'brilliant' psychological interpretations didn't help Felicity to figure out what to do. They were just further examples of thoughts Felicity had which didn't interest him.

Felicity tried something he realized could well risk his already shaky reputation with his hosts at the clinic. He asked Passionato to tense his fist, hand and wrist in various ways in order to increase the tension of those painful bands of muscles. He watched as Passionato tried every way to tense every other set of muscles and to stretch or relax the tight band. Through the interpreter (who may have feared interpreting correctly), Felicity tried to shape Passionato's efforts toward tensing the very bands which were already much too tense. At first, it didn't work.

Then Felicity turned Passionato's attention to his jaw muscles. He asked him to tense them. He could do that easily. He asked him to pay strict attention to how he was tensing his jaw muscles and to see if he could reverse the process. He could do that almost to the point that the jaw line reverted to a smooth curve. He then asked Passionato to hold his jaw as tense as he could for as long as he could. He encouraged him to keep it tight. Minutes ticked by. Twenty minutes elapsed. Suddenly, Passionato's jaw started to tremble and twitch. Then it fell open. Through the interpreter, Felicity kept encouraging Passionato to tense his jaw muscles. After about two minutes the sharp angle of the jaw line re-appeared. It held for about ten minutes before it started trembling and then fell open again. There was more encouragement. After about a minute the sharp angle of the jaw developed again. This process was continued for another twenty-five minutes, during which there were three more minute-long periods of twitching and sagging jaw activities.

But Felicity kept watching the tense bands along the forearms while this focus of attention on the jaw was going on. They were steadily becoming less apparent. Felicity asked Passionato not to move in any way, and then asked him just to look down at his forearms. Shock registered on his face and on the face of the interpreter as they stared at the smooth forearms. Then the tight bands in the arms grew once more as if stretched by the fixed stare of the two men.

Felicity asked Passionato to tighten up the bands as much as he could now. He did. He was asked to practice that exercise of

tightening them and letting them go over and over again to feel what it felt like to do both actions from inside himself. He was seen again the next day. He was strumming cautiously on his sitar. Felicity asked him to 'put that thing away'. The intended result was achieved. He seemed offended and he stared at Felicity as though the latter had just made a perverse and profane demand. However, he did as he was asked.

Felicity now had him tense and hold his shin muscles by pulling his feet up into a sharp acute angle. He did so for a while, and the bands in his forearms slowly let go. Then Felicity asked him to let go his shin muscles and to tighten up his forearms so the bands would re-appear. Passionato did so, and Felicity asked him to hold that position as tightly as he could. Passionato complained that it was very painful to do so. Felicity feigned sympathy, but affirmed that it was necessary.

With genuine courage and continuous encouragement, Passionato held the forearms in tight flexion, keeping the bands standing up tightly for an hour and a half. It seemed likely that his willingness to try was predicated largely on the magical things that had happened when he followed Felicity's directions with his jaw muscles. About fifteen minutes after he started the tensing of his forearm (the shorter time presumably being due to the fact that the muscles had already been held pretty tensely while he was practising on the sitar), the wrist and arm muscles started to twitch and then they simply went limp. He was encouraged to tense the arm again. He managed to do so after about a minute had elapsed. He held it again for about eight minutes before the

twitching and flaccidity re-emerged. The process continued for the rest of the 'session', with about eight minutes of tenseness interspersed with one minute intervals of twitching followed by quiescence. Passionato was impressed with this effect on the muscles of his forearms. But he was more impressed when Felicity said he could rest now and stop the tensing. Almost immediately, the tight bands along his forearms let go and the forearms recovered their normal smooth, fleshy tone.

The interpreter continued the exercises with Passionato for two weeks while Felicity was away on tour. When Felicity returned, the clinic was buzzing with excitement. Passionato had recovered, and he had just given the staff a concert on the sitar.

He gave Felicity a private concert before leaving to return home. Not having much couth, and thus not being much of a connoisseur of any music including that of the sitar, Felicity sat listening absolutely rivetted and entranced. He was watching Passionato's forearms. The muscles in them rippled easily as he played and there was no special band of muscles visible anywhere. The sub-dermal sitar strings were gone, and the muscle action was smooth and painless. Even Passionato's jaw line was smoothly curved and at peace as his face was transported to a mystical world in which the harps of heaven played gently and lovingly to him.

A Realistic Tic

Perry was referred to Felicity for treatment of his severe spasmodic torticollis. That means that the muscles at the back of his neck and shoulder kept tensing suddenly, twisting his head

sharply around to the right through almost 90 degrees of rotation and his chin was pulled down and his head tilted backwards. Some of the time, if he wanted to see where he was going, he would literally have to walk sideways. Besides, it was painful. His condition was sufficiently severe that his physician had said that if he could not soon get rid of the torticollis, they would have to cut the nerve feed to the affected muscles surgically so that he would be partially unable to turn his head in that direction any more. What a barbaric thought! I suppose that when you only have a hammer, everything you see looks like a nail.

Now Felicity knew about an instance in which treatment using EMG-feedback had made a case of torticollis worse. EMG stands for electromyograph, which is the recording device for measuring muscle potentials. That big word reduces to 'electro', meaning the measurement or recording of electrical potentials, from the 'myo' or muscle cells. The muscle cells are activated by the electrical potentials of the motor nerves which feed the muscles. These electrical potentials are recorded on a 'graph' to display changes in them. How do you like that for a complicated statement about something quite simple?

Fortunately, Felicity also knew the mistake that was made by the psychiatrist in using the EMG-feedback in that other case. A big complicated instrument called a polygraph (literally, a unit containing many channels for graphing from many electrode pick ups) had been set up to record several EMG channels. Electrodes, to pick up EMG signals from the muscles, had been stuck on the patient's shoulders and upper back. The idea was to record the

amount of tensing of the muscles involved in the torticollis over long intervals of time. The polygraph had been set up in advance with threshold filters, so that when a strong EMG signal was detected by the machine it could switch off something else -- in this case a record player. When there was little or no activity recorded from the muscles, the record player would be switched on again. The recorded music was to serve as 'feedback' so that, as it was switched off and on by the polygraph relays, it would tell the patient how she was doing -- hopefully to help her to learn how she could relax the muscles involved in her symptoms.

The idea was an elaborate one and not bad in its essential conception. But nobody listened to Felicity when he pointed out that a basic mistake was being made. The patient loved classical music. So did the psychiatrist. The psychiatrist assumed that the patient's love of classical music would result in her receiving pleasure, and thus 'reward', while the music was on. This was the only instance in which Felicity's general and uncouth view that music is just unwelcome noise was right. Many people would understand this idea if it referred to the gentle melodic refrains of contemporary music -- which combines the mellifluous tones of jack hammers, pile drivers, dentists' drills, cannon fire and ricocheting bullets, all recorded in a tin can, and played at peak volume for the benefit of the stone deaf. But few would accept the idea that Felicity's views apply equally to classical music. But, whether pleasant or not, all music is noise and, especially if it is liked, it is arousing -- it gets the person tense. So turning on the music when the patient was relaxed made her tense, and

turning it off when she was tense was calming. It was her symptomatic tension which was being rewarded or reinforced, and so the method taught her to increase her symptoms and their strength.

Now the psychiatrist who had done this experimental EMG-feedback procedure with this lady was Dr. Asch. So when Perry was referred to Felicity for treatment of his torticollis, Felicity got an interesting (to him) idea. He decided to repeat the experiment, but to 'reverse the contingencies' in order to be able to do the Asch-backwards experiment. He connected EMG electrodes to Perry's skin over the muscles near those involved in the torticollis. He arranged for varying electronic sounds, including static (the only cognate for music he recognized), to be fed to a single earphone in Perry's ear. These sounds were switched on while there was above-threshold (tense) activity from the muscles and switched off when there was below-threshold (non-) activity from the muscles.

Meanwhile, he sat with Perry and taught him the art of deep muscle relaxation of all the muscles in his body. The procedure was continued after Perry had learned to relax well, with Felicity shifting to what is called 'differential muscle relaxation' -- the skill of relaxing separate muscle groups separately when they are not being used, even if other muscles are being used.

Perry's spasms soon began to occur less and less frequently and, when they did occur, they started to be less and less severe. Within twenty-five sessions, there were no visible occurrences in his daily life of the torticollis. There were still some mild spasmodic EMG activities from the affected muscles. The procedure was continued for another five sessions until the EMG no longer

recorded any spasms even when he moved shoulder or arm muscles on either side voluntarily -- except, of course, the EMG reactions associated with the movements.

Felicity told Perry he did not know whether the effects would last indefinitely. He encouraged Perry to make contact with him again if the torticollis returned at all, saying it would likely require very few sessions to reinstate the calm habit. Perry was delighted with the results and assured Felicity he would be in touch if it happened again. That was twenty years ago, and Felicity has heard nothing more from Perry.

A Ticklish Tic

But who can afford to set up a complicated EMG device with relays and feedback systems built in to deal with other cases of torticollis? Few can, especially since these cases are quite rare. But there is a less rare situation which is, in some ways, an analog to the problem presented by torticollis. These are the hyperactive children and young people of the world.

Now, one should be very careful about interpreting hyperactivity as 'just' that. We can easily be misled by noticing the obvious. A couple of examples might be instructive.

A mother brought her five-year old son to see Felicity. She was at her wits end. The child was not yet toilet trained and would urinate night or day in his pants. Now Felicity is not fond of young children and he didn't relish having a kid hanging around wetting on his furniture and dribbling on his rug. So he thought he might just turn the task back to the mother -- poor thing. He

asked the mother how old her child was. She said he was five. Felicity asked how old she thought of him as being. She said she thought of him as five and, frankly, she was worried about how the other children at school would take to his wetting himself. Felicity asked her whether she would be as worried about it if the child was two. She said she would not. Felicity asked what she would do about the problem if the child was two. She said, she would toilet train him. Felicity beamed. "Wonderful," he said, "so why don't you take him home, think of him as two and toilet train him." He added that it would be nice if she would phone him in a couple of weeks to let him know how she was doing. She did. And she reported that she had successfully toilet trained him and he was no longer wetting himself.

But that refers to the effects of a simple expectation. Here is another story which is even more instructive and more serious. A young person in his late teens was admitted to the old mental hospital where Felicity had worked. The presenting symptom was 'head banging'. Everybody assumed he must be mentally retarded, doing as many mentally disadvantaged people were known to do, namely, to rock and to bang their heads on the wall fairly continuously. Still, there was a risk that the concussion from the head banging might do harm to his brain, his skull or the retinas of his eyes. So the staff thought something ought to be done about this symptom. Felicity was asked to see him.

Psychologists do psychological tests, right? So Felicity administered an intelligence test to the patient to confirm that he was mentally handicapped. The patient did not like the testing,

and he winced repeatedly when Felicity asked him questions. But the intelligence test score was well within the 'normal' range. Ouch! This young person was not mentally retarded. So what was the matter? Felicity bugged the medical staff to check him out. Finally, they did. He was found to have an abscess in the middle ear. It hurt like hell, and he preferred to distract himself from the ear ache with the pain from the head banging. It's not a bad idea to find the cause of something before you spend too much time trying to treat the symptom(s).

But Philip was just a restless, hyper-active boy in his mid-teens. He had been hyper-active all his life. In his mid-teens he was assaulted by a group of boys who pounced upon him unawares. His parents feared that he may have been traumatized by this incident. And certainly the scores on the tests seemed to confirm that he was suffering from traumatically-conditioned anxiety of fairly recent origin. Felicity decided to try to get rid of the anxiety by means of Wolpe's reciprocal inhibition therapy (RIT) and, when that failed, by means of Quirk's stimulus conditioned autonomic response suppression (SCARS) procedure (described in other stories). Neither method worked.

The problem was that Philip could not, or would not, sit still. As a result he could not relax for RIT, and no stable GSR measure could be obtained to allow conditioning in SCARS. Felicity had already found a way to deal with this accessory problem in some other similar cases.

A friend and colleague had an organization working with him. One part of that organization designed and built electronic

equipment to specifications. Felicity got his friend, Fortunato, to arrange to have an 'immobility conditioner' built for him. The equipment they developed required a neon light bar on one side of the subject, shining its light across the surface of the reclining person's body. On the other side of the person was a stand on which was the immobility conditioning unit. It was a little box with a photo-sensitive (light-sensitive) electronic sensor on it pointed across the subject toward the light. There was a knob on the box with which Felicity could adjust the threshold response so that no sound was emitted from the speaker in the box. Then the volume knob was turned up full. If the unit was adjusted just right, any time the person moved just a bit, thus changing the light or shadow pattern reaching the photo-sensor, the unit's oscillator switched on and a loud, shrieking sound was emitted by the speaker. As soon as the shadow or light pattern returned to its former state, the sound would stop. This little unit proved very effective in stopping restlessness and hyper-activity during treatment sessions, thus allowing desensitization procedures to be undertaken.

It worked very nicely with Philip. Once he had stopped moving about on the reclining chair, he learned quickly to relax, and the RIT method for desensitization was completed in 15 sessions. Of course, all Felicity had done was to use a cheaper and simpler procedure than the analogous EMG-feedback procedure to do much the same thing. No doubt, people who like to spend money on T.V.s, computers and other electronic systems would be able to achieve the same result using an interesting pattern on a monitor (for the

subject to watch) controlled by any of a number of types of devices for detecting muscle potentials or movements.

A Mortified Mortician

At the other pole there was Peter. Peter phoned to arrange an appointment to see Felicity. When he entered the office, Felicity became genuinely alarmed. He feared Peter had come into his office to die. The man he saw was in his mid-thirties. He was emaciated and pale. He looked like a ghost, or like death not yet warmed over. The man had bones and he had skin, but there was hardly any flesh at all. That's right, he looked like a skeleton with some pasty white skin stretched over it. Felicity marvelled at the fact he was walking at all. What could he possibly want with Felicity? He ought surely to be living in a hospital.

And he had been living in hospitals undergoing tests of all kinds to find out what was wrong with him. Finally, some physician had decided that he must have an ample dose of thanatos (death wish) and had referred him to a string of psychiatrists, and finally to Felicity. Felicity was fascinated with the idea, but he didn't know what to do about it. So he did the same thing each of the physicians had done in the past. He took a history.

Until his early twenties, Peter had been a robust, hardy and athletic young man. At about twenty-five his physical condition started to decline. He felt sick to his stomach all the time and he often had cramps and diarrhoea. There was no accident near that time or before it to help account for the change. He had not been sick at all prior to that. Felicity was not satisfied with that

report and he pushed for a detailed history of illnesses. Peter had payed a visit to Mexico in his early twenties and he contracted 'Montezuma's Revenge'. But he got that under control quickly.

Felicity asked how he had got it under control. He said he had gone to a physician in Mexico who had prescribed antibiotics for him and he had started taking them. Felicity asked what kind of antibiotics he had received. Peter said he didn't know, but they were nicely flavoured lozenges which were available across the counter. Pressed for more details, Peter said he knew he couldn't get these things at home and so, since he liked their taste, he brought bags of them home with him. Had he used them? He had. In fact, he enjoyed them so much he ate them like candies, and he had a big enough supply of them to last him for almost a year.

Felicity groaned a sigh of understanding. He asked Peter if he drank much milk. Oh yes, his doctor had told him to drink lots of milk for its good nutrients to try to build his body back up again. Felicity scowled and bit his tongue. "OK," he said, writing down a list of names on a slip of paper, "I want you to go to a health food store and make a purchase. Buy the first product I have listed and try it for two weeks. If you feel no change, try the second product for two weeks, and so on down the list. And I want you to come in to see me to monitor how you're doing every two weeks. And phone me if you feel there is anything unusual or wrong." A psychologist giving a prescription!?

Peter was astonished too. He asked Felicity what the pills he was being asked to buy were. Felicity agreed he owed Peter an explanation for this unexpected development. He pointed out to

Peter that antibiotics do not just kill foreign bugs which attack the body. They kill any kind of living tissue -- they are anti-, or against, biotic, or biological life. Now, there are flora and bacteria in the intestines which are there to maintain the health of the body. One set of these healthy and normal flora are called lacto bacillus acidophilus. Their job is to help in the digestion of lactic acid in milk. If these healthy flora were killed off by the long-term use of the antibiotics, then Peter would be unable to digest milk products. The lactic acid should produce the very kinds of intestinal symptoms he had reported, and the associated intestinal activity could easily prevent the digestion of other food stuffs he ate. The pills that Felicity was suggesting were various brand names under which lacto bacillus acidophilus is sold. He thought the first on the list was the best, and so he had suggested Peter start with it. Through the mask of his stretched facial skin, Peter looked as though he was completely confused, but he said he would try it out as nothing else had worked. He said he would phone if anything seemed to be going wrong.

When Peter appeared for his next appointment two weeks later, Felicity gave a double and triple 'take'. Felicity's reaction was not lost on Peter and he smiled and chuckled with pride. Where was the ghost? The man who presented himself at Felicity's door had colour in his skin. The pasty look was gone. There was even a little fullness in his cheeks. The deeply sunken, hollow eyes seemed almost alive in contrast to their former appearance. In place of the stooped posture and the laboured movements which had seemed to exhaust him, he stood erect, almost as though he had some

liveliness. He reported that he had experienced no cramps, no diarrhoea and no sense of feeling sick to his stomach. His appetite had improved radically. He had recovered his good mood and some sense of energy and vitality. Felicity bantered with him. "No, you can't do that to me," he complained, "how will I ever survive in business. You get feeling awful at once, do you hear," and the like. Peter was absolutely delighted with himself.

He was seen for the next two months on a fortnightly basis. He began to put on weight as the flesh filled up under his skin. His appetite was excellent, and he began talking about the huge lunches or suppers he had eaten. The bony look of the skeleton disappeared, and a slim but robust looking body was building.

When it seemed there was nothing left to do and Felicity was about to send him back to see the referring physician, Felicity received a call from the physician asking whether Peter had yet made contact. There was a tone of concern in the physician's voice which vanished when Felicity said that Peter had indeed made contact. Felicity asked why the physician was concerned. The physician replied, "If you've seen him, you'll know what worries me. I don't know how much longer he can survive." Felicity said that he thought Peter was doing pretty well, and that he was about to ask Peter, who was with him right then, to have a check-up with his physician. The physician took this as reason for concern and he said he could see Peter right away. Since Felicity's office was in the next building, perhaps Felicity could bring him right over.

Felicity had a break in his schedule and he agreed to do that, thinking the physician might have some intelligence to share with

him face-to-face. The physician was standing in his waiting room as Peter and Felicity entered. The physician greeted Felicity, looked out the waiting room door as if to look for someone else, then turned and looked at Peter while enquiring of Felicity if Peter had not been able to make it over. Peter emitted a bright laugh and said, "Hi doc. Don't you remember me? I'm Peter." The physician stared at him in disbelief. Then he sunk in mute utter shock into one of the waiting room chairs. The receptionist, who had been listening to what was taking place, rushed out of her room into the waiting room, stood in front of Peter and stared at him. She almost screamed at him: "Peter, are you in there!?! What happened to you?" "I got better," he replied.

The physician got up and ushered Peter into his office, calling back over his shoulder to Felicity, "I've got some more patients to refer to you." Of course, he never did. Felicity was used to the fact that in this business, if you 'invent a better mouse-trap' people will avoid you like poison.

Peter came to see Felicity two weeks later for his next appointment. He said that the physician had examined him and declared him recovered. Then the physician had wanted to know what Felicity had done to him. The physician probably thought that Felicity must have used hypnosis to achieve this miraculous cure. When Peter told him about the lacto bacillus acidophilus, the physician was reported to have snorted something like, "Is he practising medicine without a license?" Felicity shrugged. They both chuckled a little. Then Peter made his way off into the sunset, but not on a white horse -- his own legs were quite strong

enough to support him now.

A Tubal Trouble

The state of the body is not only understood by looking at its outside. It can often be experienced from the inside. Of course, sometimes the inside condition can't be experienced directly. Phoebe was such a person. She was referred to Felicity by her obstetrician and gynaecologist. Phoebe and her husband wanted to have a baby. But there was something wrong. It was discovered that Phoebe's tubes were too tight to permit an ovum to pass through into the uterus. While air pressure could be used to demonstrate the tubal constriction and also to create temporary expansion of the tubes, it did not help to keep the tubes open. The physician thought it possible that some hidden conflict in Phoebe's unconscious might be causing Phoebe to tighten her tubes. Perhaps Felicity could unburden Phoebe of this conflict.

Felicity thought it was an interesting challenge. He had (and has) no idea how the tubes might get tightened up, and he was far too impatient to wait through years of psychotherapy for the patient to be unable to unravel the mystery for him. So he decided on the basis of the psychological tests that the problem was merely that Phoebe was too anxious and uptight, and that uptightness for her had a visceral target. Perhaps reducing her anxiety arousal generally might turn the trick.

He selected Quirk's stimulus conditioned autonomic response suppression (SCARS, described in other stories) as the method of choice for the desensitization. There was nothing clever about

this decision. He simply reasoned that using the galvanic skin resistance (GSR) as the response through which to train anxiety reduction would be more relevant to how the insides of the body functioned than using relaxation training of the skeletal muscles (as in Wolpe's RIT method). Since Eysenck's Extraversion score suggested that she conditioned at an average rate, he set out to do thirty-three half-hour sessions (the average number) of SCARS.

Now Phoebe and her husband had been trying to get her pregnant for about six years without success. The 33 sessions took about eighteen weeks to complete. By session twenty she reported that her period was late. By the time they had finished the treatment programme, her pregnancy was confirmed and she was well on her way to having the hoped for baby. She phoned Felicity as soon as the baby was born. He was in good health and she was ecstatic. Who knows what happened? Felicity doesn't.

A Crohn's Cronies

One day, a friend, Penny, phoned Felicity. She asked if she could see him on a professional basis. When she arrived, she looked depressed and distraught. Felicity was alarmed and asked her what was the matter. She said she had to come to grips with her mortality as her doctor had just told her she was going to die.

Felicity felt like using some obscenities. He refrained and asked her please to fill him in. She said she had been suffering acute pain in her lower abdomen and she had consulted her physician about it. He had run a series of tests on her and then had called her in. He had informed her that she had Terminal Ileitis.

Felicity asked her what that meant to her. She said that, as far as she knew, 'terminal' meant it would result in death, and she understood that 'ileitis' meant the dread killer was Crohn's disease. Felicity asked Penny what else her doctor had told her about this condition. She said he had told her that she would be started on cortisone, and that if the disease progressed she would have to have, possibly repeated, surgery to try to halt the progression. Felicity was unable to contain himself any more. He swore using some 'street' invective. Then he apologized to Penny.

He said: "I'm truly sorry you got in the hands of a twit, Penny. Let me explain what all that is about. The phrase 'terminal ileitis' refers to swelling or inflammation (-itis) of the part of the body called the 'terminal ilium'. The terminal ilium is the last little part of the small intestine before it connects with the large intestine or colon. It is called 'terminal', in healthy people too, because it is the last little part of the ilium. Terminal Ileitis, or swelling of that part is called Crohn's disease. It is not fatal. Crohn's disease, for the patient, is a source of pain and anxiety. Crohn's disease, for the surgeon, is a wonderful source of income. What may make Crohn's disease dangerous, and perhaps even fatal, is the treatment it receives from the physician.

"The chemo-therapy is usually cortisone. Cortisone is a naturally occurring stress hormone produced by the adrenal cortex, and its effect is, among other things, to settle down arousal or activation of the immune response of the body. When it is given as an exogenous substance (as a medication) it tends to lull the

immune system. That reduces the irritability of body tissues, usually reduces the swelling (or 'itis') and thus usually reduces the pain. Over long maintenance use, it also lulls the immune system such that it may not respond well to infection. Infection may then spread, and that can be dangerous.

"If the chemo-therapy is not working well enough, the other choice available to physicians is mutilative surgery. The surgeon may go in and cut out the affected (NOT infected) part of the small intestine. If the pain recurs, he may go in again and again to cut out more and more of the intestine -- IF the patient allows him to do so. Of course, as the intestine is thus shortened, it becomes harder and harder for the body to retrieve nutrients from the food it receives, and that may make the person weaker and weaker, and less able to cope in a robust way with the strains of living. Also, each time the surgeon cuts into the body it represents a serious and stressful insult to the system, as well as causing injury to which the body may react with other kinds of conditions.

"So what am I saying to you? Don't do it! Let's, please, think this thing through together." For reasons Felicity never understood, Penny had always liked and trusted him. She was shocked at her misunderstanding of what the physician had told her. She was relieved by what she now had heard. But she was fearful that on this occasion Felicity had things wrong. She pleaded for some confirmation of what he had told her. So, together, they looked up some medical texts to be sure Felicity was right.

Once she felt she had confirmed and understood the information she had received, she asked what they could do about her condition.

They started with 'the basics'. Inflammation or swelling of any tissue occurs when the body's immune system identifies a substance or object as being foreign. For example, some respiratory system cells can react to environmental substances (allergens) as if they were dangerous when they are not; some skin cells can stimulate the reaction if they become infected, and thus may form pimples; and some intestinal cells can produce that reaction to some kind of food or substance in the intestines, as in Crohn's disease.

There are several parts of the immune system's reaction. Fluid is pumped into the area, causing swelling, which may be painful. The blood vessels dilate or expand (causing redness or inflammation) to allow an increase in the number of white cells which can get at the area to attack and kill any infection. The suffix 'itis' refers to the swelling and inflammation.

The immune system is activated by the autonomic nervous system, which stimulates and orchestrates it. The autonomic nervous system, in turn, has been activated by the brain, which has identified some 'danger' within the system it regulates and controls -- the whole body. The brain and autonomic nervous system, being nervous tissue, can learn to recognize and react to dangers, apparent or real. Similarly, they can be taught to stop reacting to unreal dangers.

Is there any real 'danger' there for the body to react to? Perhaps, but it is likely there is none. If there was something there which really threatened the body's survival, within at most weeks, either the danger would have been dealt with by the immune response, or the uncontrolled danger or infection would have spread

pretty widely and the person would be dreadfully sick or dead. By the time the inflammation has been there for, let's say, six months something other than an active or infectious agent is 'causing' the continuation of the symptoms. What could that something be?

Although some kinds of chronic diseases seem to travel in families, any genetic factor involved tends to provide only a weak pre-disposition to 'react' in the way defined by the disease. The effect of a weak genetic link rarely insures the development of the illness -- this is not always true, witness a straight hereditary disease like Huntingdon's Chorea. But let's talk about the emergence of a disease as if it were the overflow from a cup. There may be some sediment filling the bottom of the cup from a genetic factor. Then there is some amount of 'fill' in the cup from the amount of the irritating substance (poison, infection or allergen) available to the person -- too much may fill the cup because the system can't deal with it, although that too is rare. The third, and last, thing which is poured into the cup is the available 'reactivity' of the target kind of tissue -- this is usually a general bodily 'reactivity', but it may be specific to the particular tissue. This 'reactivity' is probably best represented by the reactivity of the person's immune system or, which is the same thing, the reactivity of the person's autonomic-stress nervous system. If these three things added together produce 'enough' total reaction, the cup may over-flow or the threshold of the illness may be exceeded, and the illness develops.

Now, we can't easily alter the person's genetic inheritance.

By living under reasonably sanitary conditions we can usually control the amounts of poisons or infections getting into our systems -- that's what public health is all about. But the thing we really can control is the 'reactivity' of our stress systems. That is why cortisone is used to treat so many immune diseases, like Crohn's disease. It damps down and lulls the immune reactivity. But it also suppresses the immune response making it hard for the body to rally to fight off infections. There is another way.

The other way is to help the immune system to get some rest. That not only lulls it a bit, but it also keeps it fresh and ready to deal with poisons, infections and allergens if it needs to. This other way, unfortunately, is not understood by physicians. It involves training the autonomic nervous system into a peaceful and restful state. The standard ways to do this are called stress or anxiety desensitization methods. And there are several of them. To deal with a physiological response within the body, perhaps the best method is Quirk's stimulus conditioned autonomic response suppression (SCARS) method (described in several other stories).

Penny decided to try SCARS. Galvanic skin resistance (GSR) electrodes were attached to her right hand. She was shown sets of slides related generally to classes of anxiety which she reported on a Fears Survey Schedule. Every time her GSR response increased (less sweat) by at least 1,000 ohms, the slide she was looking at was changed to serve as a 'reward' for her body having 'calmed down' by a small amount. There were thirty-five half-hour sessions. She was on cortisone at the beginning of this treatment

programme, so that it was impossible to tell when the inflammation stopped. About two-thirds of the way through the SCARS programme, she stopped using the cortisone. There was no pain, nor has she had any more bouts of pain in the 15 years since this treatment was completed. It seems to have terminated her terminal ileitis.

A Pyloric Retread

And then there was Paul. Paul had developed kidney failure. A suitable donor was found, and he had a kidney transplant. Unfortunately, the body's immune system identified the donated kidney as foreign tissue and started to attack it. That is, organ rejection started to take place.

His physicians did the usual thing. They put him on quite massive doses of cortisone to lull the immune system, hoping the transplanted organ would start to be recognized as a personal belonging after a while. The organ rejection continued and the cortisone levels were increased.

At this point, Paul consulted Felicity. He asked whether some method of psychotherapy might help to limit the organ rejection. Felicity agreed it wouldn't hurt to try. They started on a programme of SCARS, as described with Penny just now. By half-way through the programme, the indications of organ rejection were weaker and the cortisone was cut back. By the end of the programme, the indications of organ rejection had stopped and Paul was off all cortisone. He remained healthy during the next five years of occasional contact.

Did the cortisone finally turn the trick? Did the body just

stop trying to reject its new organ? Did the SCARS treatment help? Felicity doesn't know. Of course, you know. Whatever position (belief) you happen to hold, the SCARS method was at least like chicken soup -- it may not have helped, but it couldn't hurt.

A Misplaced Plaque

Priscilla collapsed one day at home. She was taken to the hospital where, after a number of tests, she was diagnosed as having Multiple Sclerosis. Cortisone was prescribed to help her body function more effectively, and she was released home. But then she began to fall down and lose consciousness. She was subjected to a C.T. Scan and an EEG. The C.T. Scan showed that the plaques on her nerve fibres, which are thought to represent the underlying pathology in Multiple Sclerosis (MS), had progressed to her brain. The EEG results showed that she was subject to epilepsy. The events in which she fell and lost consciousness were diagnosed as grand mal epilepsy.

Dilantin and Phenobarb were prescribed to deal with her epilepsy. However, even although the dosages were increased greatly, the seizures continued. She had to be admitted to hospital from time to time, both due to MS 'episodes' in which she lost control over her body and could not move, and due to injuries suffered in falling during her epileptic seizures.

The neurologist was concerned because the seizures could not be controlled with medication. So he referred Priscilla to Felicity to see if he could reduce the rate of occurrence of the seizures. The referral and the case appeared to be a fairly

straight-forward task of seizure frequency reduction. So Felicity used Sterman's SMR training method for the purpose. He connected EEG electrodes to Priscilla's scalp near the C3-C4 sites, and began training Priscilla's brain toward an increased production of sensorimotor rhythm (SMR). This was done by providing whistling 'feedback' contingent upon SMR production -- this means the whistle was turned on when SMR was present and off when SMR was absent. This procedure has been described in several other stories.

There were twenty-five sessions of SMR training. The seizures stopped a quarter of the way through this training, and they continued to be absent when the anti-convulsant medications were withdrawn. This was all that had been expected or hoped for. And it did prevent seizures, and thus reduced the risk of injury. But something else happened too. Although the losses of functioning -- in vision and muscle coordination -- did not reverse themselves, there were no more of the attacks or 'episodes' by which MS progresses, and there was no further deterioration of her physical and mental functioning. Fifteen years later she remains able to function at the same relative levels at which she was functioning at the end of this treatment. And there have been no further seizures or MS episodes, although she has remained off the anti-convulsants and the cortisone. How come? Felicity can only guess.

A Nervous Nervosa

In a way, Pam presented a treatment problem similar to Priscilla's. Pam was a pretty young lady in her early twenties. The only thing which marred her beauty was that she was terribly skinny -- emaciated, in fact. The trouble was that she was afraid

to eat. When she was referred to Felicity she had been diagnosed as suffering from anorexia nervosa.

Like so many so-called diagnoses, anorexia subsumes a lot of different kinds of conditions. The risk with most of them is that the patient will become dehydrated or starved and will die. Pam had spent a great deal of time in hospital where the main effort, other than investigating her, had been to keep nutrients going into her to prevent her from dying. There was still no satisfactory way to account for her anorexia.

Felicity did his usual thing of administering and scoring a number of psychological tests. Once more, the Differential Diagnostic Technique (DDT) provided the main useful information. This test was described in Chester's case, and has been referred to often in the foregoing. The test showed that Pam had a particular problem in perceiving visual angle, seen in handling straight-line as compared to curved-line figures. And the size of the discrepancy was such that it could not properly be accounted for on the basis of commonly recognized personality problems. It occurred to Felicity that the problem in the perception of visual angle implied by these test findings suggested that Pam had an irritative focus in her brain, in the area of the 'drive centre'.

Although you might think this finding is becoming a bit boring, in this case it seems likely that the part of the 'drive centre' implicated in Pam's partial seizures might be the satiety centre. That is, if electrical short-circuiting was repeatedly triggering electrical activity in the satiety centre, Pam's body would constantly feel as though it had already eaten, was satisfied and

required no food. If this strange hypothesis was valid, then using Sterman's method to train her brain to increase its output of sensorimotor rhythm (SMR) might prevent the short-circuiting so that she would no longer feel as though she was stuffed with food and she might start eating. The idea at least warranted a test.

Pam went through a total of twenty-two half-hour sessions in which she received a whistling sound whenever her EEG showed any SMR activity from the C3-C4 sites, and silence when there was no SMR activity there. Her time-integrated SMR production rose from about 8 percent during the first sessions to about 50 percent during the last sessions. By the 15th session she had started eating and was recovering some weight. By the last session, her weight was approaching her normal weight at about 115 pounds. She reported that her appetite had returned and that she enjoyed eating again. What happened? Is EEG-SMR training a way to develop aesthetic sensibilities to create one who appreciates good food?

A Vascular Vagary

Pat was suffering from intense headaches. The referring physician said that she was having migraine attacks. Felicity checked out the other possibilities to account for her headaches. There was no reason to suppose she was having sinus or tension headaches. Certainly she was having the visual disturbances and the nausea which often go along with migraine.

Green had structured a method to help people learn to increase their skin temperature as a specific treatment for Migraine and for Raynaud's disease (patches of cold skin). Pat agreed to try a bit

of skin temperature biofeedback training.

Migraine is supposed to be a vascular disorder -- affecting the blood vessels. What is supposed to happen is that the blood vessels start to spasm -- to tighten closed and then loosen open quickly, like a tremor of the muscles of the blood vessel walls. Although, in principle, the dilated or open condition of the blood vessels is generally the healthy way for them to be, the pain of migraine is thought to come from the rapid opening or dilation of the blood vessels in this 'tremor'. To achieve a healthy state, the task is to get the blood vessels to remain relaxed and open.

Now, in a standard temperature environment, the only thing which alters the skin temperature is the volume of blood in the peripheral blood vessels (just under the skin). If the blood vessels near the skin dilate, the volume of blood flowing through them and getting near the skin surface increases and the skin temperature rises. Among other things, this allows the body to release heat from the skin surface to the environment, and it is why some people have warm skin. If the blood vessels near the skin contract or tighten up, the volume of blood reaching them and getting near the skin surface is reduced and the skin temperature declines (gets lower). Among other things, this allows the body to conserve its heat, and it is why some people have colder skin.

The only way to increase skin temperature is to increase the volume of your blood near the skin. This can be done by training the peripheral blood vessels to dilate and to remain dilated. If a person who is prone to migraine can do that, the migraines usually stop.

Pat had a thermistor (a temperature pick up) affixed to the palmar surface of the middle finger of her right hand. This allowed her skin temperature to be monitored continuously on the biofeedback unit. In the usual procedure, the person is asked to listen to a continuous tone which varies in pitch as the skin temperature varies. Usually, the biofeedback machine provides lower pitch tones as the skin temperature increases, and vice versa. The continuous analog feedback of the tone allows the person to 'find out' what thoughts and the like help to raise the skin temperature. Then, if a migraine aura (indication that an attack is about to happen) occurs, the person can then think the relevant thoughts, raise the skin temperature and prevent the migraine attack. That is, training with continuous feedback results in discontinuous voluntary self-regulation whenever it is required.

But Pat wasn't aware of any aura to warn her that a migraine attack was about to occur. And once it had begun, she forgot everything she had learned and was 'locked into' her headache. Voluntary self-regulation was not likely to work well for her. Instead of giving her continuous feedback, she was given discontinuous and contingent feedback. Contingent feedback means that she only got the 'reward' of feedback if and when her skin temperature did what it was supposed to do -- in this case, when it rose. Contingent rewards for any kind of response tend to increase its habit strength. The result is that suitable kinds of discontinuous and contingent feedback eventuate in continuous production over time of the automatic learned response. This

seemed to be a more satisfactory approach to Pat's problem -- that is, to train her in habitual and automatic re-regulation rather than in voluntary self-regulation.

A digital counter was placed in her view while she was attached to the skin temperature unit. She was told that Felicity did not want to disturb her relaxation by talking to her. So every time a new count appeared on the digital counter, that was to be his way of saying 'good for you'. Felicity monitored the silent skin temperature unit. Each time Pat's skin temperature increased successively by one-tenth of a degree Fahrenheit, Felicity pressed the remote counter control and increased the count by one. If the temperature dropped down again (for any reason), Felicity waited until it had recovered by at least a half degree and then he started again pressing the counter button to give her counts for temperature increases. The number of counts and the starting and ending skin temperatures served as the treatment record.

During the first few half-hour sessions, Pat's skin temperature started at about 70 to 75 degrees Fahrenheit, and it remained under 80 degrees. She would get as many as sixty to ninety counts as the skin temperature fluctuated up and down. By half way through the 20 sessions, she would start at around 75 to 80 degrees and her skin temperature would rise to 90 to 95 degrees. Her counts tended to run up around two hundred counts in the session. By the last few sessions her skin temperature started around 90 to 95 degrees and would increase to 95 to 99 degrees, and her counts declined again to about sixty to ninety in a session.

As training progressed, the skin temperature rose more and more during successive sessions. In addition, her initial skin temperature, recorded at the beginning of each session, began to rise steadily over time. That certainly suggested that her skin temperature habit was being established upwards.

Meanwhile, her migraines simply stopped. None was reported after the third training session. She reported no further headaches when Felicity met her some three years later. And when he shook her hand it was warm.

A Gnarled Knuckle

Felicity has not yet been privileged to treat a patient with cancer. Other psychotherapists, such as the Simonton and Mahrer, have had that opportunity, with remarkable recoveries reported. It makes perfectly good sense that cancer ought to be both preventable and curable with properly devised psychotherapy. This statement is based on a number of reasons related to the real (i.e., non-viral) causes of cancer. However, to talk about that without any stories to support the talk, would surely tax your credulity beyond the point of its survival.

But then, there is arthritis. Like cancer patients, few arthritics will pursue treatment by a psychologist. After all, with both cancer and arthritis, you can see and feel the physical swellings of the body parts. There are 'real' physical things there, so how could 'the mind' have anything to do with it? Of course, this way of thinking has very little to do with what psychotherapy and Psychology are really about.

The so-called body and the so-called mind are really not separate parts of the person at all. They are one. The body refers to the anatomy and chemistry of the body, and the mind refers to the way they work. Perhaps you could say that the mind refers specifically and particularly to how the brain works -- but then the brain controls and regulates how everything works and everything the rest of the body (and itself) does. Psychology has to do with the living (functioning, doing, reacting) body. In contrast, the anatomy and chemistry are virtually the same whether the body is alive or dead -- which is why physicians can be trained, and post-mortems undertaken, on cadavers. For present purposes, let's pretend the body is still living.

Patrick was referred to Felicity because of a stomach ulcer which was flaring up repeatedly. The referring physician thought he might be unduly anxious, perhaps due to psychological traumatization from a traffic accident in which he had been involved. There was some traumatic anxiety identifiable in the tests the psychometrist administered. It might be worth treating. But he was more interested in seeing if the ulcer could be healed.

Then he met Patrick and he was no longer interested in either of those issues. Patrick's hands were absolutely deformed by arthritis. He could do almost nothing with them. The direction of his fingers was at about a forty-five degree angle with the plane of his hand. His knuckles were swollen to easily twice their normal size. He did not bother to comment on his arthritis to Felicity. After all, what could a psychologist do about that?

Now Felicity understood Patrick's point of view and did not

even try to contradict it. Heck, even the research on arthritis seemed to suggest it was not a psychosomatic disorder. In fact, Felicity knew that in one study by a psychiatrist it had been shown that the swelling experienced in arthritis occurred before, and not after, the pain. So, the study was used to conclude that the swelling caused the pain (an assumption in itself), not the other way around. And so, at best, arthritis was seen to be a somato-psychic disorder and not a psychosomatic disorder. Makes sense, right? It does not.

Nobody in his right mind would think of the pain in arthritis as causing the swelling. That is not what makes arthritis a psychosomatic disorder. The psychological causes come long before that. Although this is not necessary, the process usually starts with some kind of injury -- from a fall or whatever. The injury results in a sensation of pain at or near a joint. Every time the person moves, the joint moves and the person hurts some more. Now nobody likes to experience pain. The body starts at once to do whatever it can to stop pain. If the pain comes from a joint, the body protects itself (automatically) by trying to stop the joint from moving -- to reduce the pain. (Among other things, that's what creates a limp -- limping prevents quick joint movement.)

Now, the best way to keep a joint from moving, other than tying a splint across it, is to tighten the muscles all around the joint to hold it still. Muscles pull across joints, and when they are tightened all around it they compress the joint somewhat. But the person keeps moving around and the compressed joint keeps moving too (even if only a little). That creates more pain, which

results in tighter muscle tension. Eventually, the lubricating fluid between the bone surfaces of the compressed joint may be squeezed out, and the two bones start rubbing together. This produces more pain -- and possibly joint degeneration from the friction of rubbing the two hard surfaces against each other.

Notice that the pain from the original injury has probably stopped long ago when the injury healed (probably in days, months at most). But the pain is being perpetuated from time to time as a result of the muscles around it having become defensively or self-protectively tensed or tightened. The self-protective tensing of the muscles around the joint is the 'psychological' cause of what is to follow.

When the brain experiences pain (whether from the original injury, or from the tense muscles, or from the friction between the joint's surfaces) it automatically activates the autonomic nervous system. That, in turn, automatically activates the body's immune system -- the brain assumes there is an injury requiring both attack on any infection and repair of the injury. The immune system pumps fluid into the area of the joint, creating swelling and thus more pain -- and more defensive muscle tension. Now the joint becomes swollen and therefore more painful, and arthritis may be diagnosed. But that's not all it does. The immune system also sends growth hormone from the brain to the affected site. Its job is to stimulate growth of the (assumed to be damaged) tissue.

If there is no damage to the tissue, but the body's immune

system keeps acting as though something is wrong (e.g., if the poison nicotine keeps attacking the lungs without actually damaging them), the continuously stimulated cell growth may eventuate in cancer. If there is some damage that the growth hormone cannot reach (as when the joint surfaces are compressed together) it may stimulate growth of cells around the area. Bone cells are living tissue too, and bone spurs may be stimulated to grow around the affected joint -- causing more pain (and so forth). That is, the body's immune system does several things, all having consequences.

If one can simply train the muscles around an affected joint to relax, the lubricant and the growth hormone can get between the bone surfaces, lubricate them and stimulate bone surface growth for re-generation to occur. Of course, when the muscles relax, the reduced muscle tension and pressure on the joint surfaces reduces the pain experienced, and this helps reward the learning of muscle relaxation as well. At least that's the theory.

It seemed clear to Felicity that Patrick needed some anxiety desensitization. First, he needed it to be rid of the anxiety traumatically-conditioned in his traffic accident. Second, he needed it to reduce the viscerally-projected anxiety and tension which might be keeping his ulcer going. And, third, he needed it to reduce the autonomic reactivity which might be keeping his hand muscles tense and the immune system trying to fight the supposed injury in the knuckles. But which kind of desensitization should be used? The visceral projection of tension (which did seem to be occurring according to his Rorschach) affecting the ulcer might suggest the use of the galvanic skin resistance (GSR) mediated

method of stimulus conditioned autonomic response suppression (SCARS) which has been described elsewhere. However, the involvement of the skeletal-striate muscles in the arthritis might suggest Wolpe's reciprocal inhibition therapy (RIT) method since it uses trained relaxation of the skeletal muscles. Felicity decided to go the latter route.

He trained Patrick in deep muscle relaxation, taking special care to focus on relaxing the hands gently. Then he asked Patrick to picture a variety of scenes in his mind while remaining relaxed. The scenes were presented in pairs, with each pair followed by the request that Patrick raise one of his fingers, one to four, to indicate whether discomfort had decreased, increased, remained the same or been absent across the two items of each pair. At successive sessions, the hand used for this finger-raising signal was alternated to allow both hands to be exercised in this way. The scenes Patrick was asked to picture included the usual sequence of traffic images which have been described in other stories. He was also asked to visualize scenes in which he became impatient, irritated and, finally, angry (to address the usual factor underlying ulcers), and scenes in which he felt mild and then severe pain, became ill and was finally admitted to hospital (to address autonomic function).

Felicity had no choice. He had to watch Patrick's hands to await his finger signals. That allowed Felicity to examine the arthritic swelling carefully at each session. There were forty sessions. By the twentieth session, there was some reduction in the knuckle swelling and the fingers were twisted to a noticeably

smaller angle. By the end of the treatment, no ulcer pain had been reported for a long time, the fingers pointed straight out from the hand, the knuckles looked to be only slightly thicker than 'normal' knuckles would be, and Patrick was beginning to use his hands almost normally, even for quite fine finger work.

Felicity saw Patrick on several occasions for non-professional reasons over the next three years. His hands looked normal, and he seemed to be using them in normal ways -- and he said they were fine. But, presumably considering the effects on his arthritis to be a result of 'spontaneous recovery', Patrick's physician did not refer any other patients at all to Felicity. Was Patrick the only case of arthritis Felicity has treated? He was not. However, the few others Felicity has seen did not exhibit visible changes except for the fluidity and ease of their movements. But, then, their arthritis was not something Felicity was privileged to examine or treat directly. In Patrick's case, his hands could be seen.

A Racked Back

Felicity can't count the number of people he has seen with back pain. In almost every case, simple relaxation training relieved the pain, at least temporarily. The point is that almost all back pain is a result of self-protective muscle tension. That's what supports chiropractic and a large part of massage therapy -- the body's defensive tension is temporarily altered and the person feels better for a while. But the pain returns when the person re-establishes the defensive muscle tension. In Felicity's practice, if the defensive muscle tension is relieved, and then is

perpetuated as a new habit by being connected to associated stimuli, the pain does not seem to recur. Consequently, if Wolpe's systematic anxiety desensitization (RIT) was used, the back pain usually vanished for the remainder of Felicity's contact.

But what of conditions such as degeneration of the vertebrae? Pierre had suffered from back pain for years. His physician had Xrays taken which showed that a couple of his vertebrae were severely degenerated. He assumed that this condition was permanent since bone substance had been lost. He therefore was extra careful with his back, ensuring that he never strained it by any heavy lifting or other hard work. Felicity could certainly understand the wish to avoid any work, heavy or otherwise.

But Pierre consulted Felicity on another matter. He had a phobia about flying. This posed a problem for him as he had a good deal of travelling to do associated with his work. He didn't want to drive because that would mean sitting for long periods of time in one, rather tense, position. He wanted to feel comfortable flying to his various destinations.

Wolpe's systematic desensitization (RIT) method was used to deal with his flying phobia. Pierre was taught the art of deep muscle relaxation. When he was deeply relaxed, he was asked to picture all sorts of scenes associated with flying. The scenes started with him at home thinking about phoning to arrange a flight, then phoning to arrange it, then packing for it, and then calling a taxi. He was asked to picture himself in the taxi at various distances from home on the way to the airport. He was asked to picture arriving at the airport, checking in at the flight

counter, walking to the waiting room, waiting, and then boarding the plane. He was presented scenes in the plane involving finding his seat, sitting down, strapping himself in, looking around inside the plane, and looking out of the window at the airport activity. He pictured the plane moving out to the runway. Then he was asked to picture arriving at his destination, with the plane rolling up to the terminal, then landing, then approaching the field for a landing. Finally, he was asked to picture the original take-off, and various stages in the flight.

This long series of presentations took some thirty-five sessions. By the time he had learned to relax, he reported his back pain was gone. It remained absent. Toward the end of the treatment programme, he arranged to have another series of back X-rays taken because there had been no back pain for a long time. He was worried that the spinal degeneration had progressed to the point that he could no longer 'feel' the injury to his back. The X-rays showed that nearly all of the spinal degeneration was gone, and that the vertebrae were re-generating themselves. He had another X-ray some six months after the desensitization was completed, and there was no longer any degeneration visible. And he had remained free of pain throughout that period of time.

If pain remains longer than six months, it is not due to a physical injury, as such. Body tissues simply renew and regenerate themselves when that which is keeping them 'injured' is removed. In most cases, the thing that 'keeps' them that way is defensive or self-protective muscle tension.

A Sore Eye At Sis' Psoriasis

How about psoriasis? Patsy had always had patches of scaly, dry, itchy skin all over her body for as long as she could remember. Every kind of pill and ointment had been tried with no noticeable benefit. She was referred by her psychiatrist for behavioural treatment for her social anxiety. She was always embarrassed around people, and she tried to stay away from others as much as she could. On inquiry, it was clear that the main reason for her social embarrassment was her appearance. She thought other people would be disgusted by the look of her psoriasis and, anyway, from her point of view it marred her attractiveness -- so what was the use? While talking with her psychiatrist, they had concluded that, since nothing could be done to get rid of the psoriasis, it would be best to deal with her social problem as though it was a social anxiety.

Felicity thought he would be pretty self-conscious too if his skin looked like Patsy's. The skin condition was too widespread over her body to be susceptible to the mirror-gazing procedure, described elsewhere to condition inhibition of self-image. He didn't know much about psoriasis, and his attempts to find useful literature on it suggested to him that few other people knew much about it either. However, it had to be some kind of an immune response so that moderating the autonomic nervous system's reactivity ought to influence it somewhat. And that approach would also be consistent with the anti-anxiety treatment he was being asked by the patient to undertake with her.

He connected galvanic skin resistance (GSR) electrodes to the

palm and back of her right hand. For half-hour sessions, he showed her pictorial slides selected to represent the areas of phobia or fear depicted in her responses to a Fears Survey Schedule. Each time her GSR level increased (less sweat, more 'calmness') by at least 1,000 ohms, the slide she was watching was changed as a 'reward' for getting more physiologically comfortable. The procedure used was stimulus conditioned autonomic response suppression (SCARS) which has been described in several other stories. There were thirty-five treatment sessions in all.

By half-way through the treatment, Patsy was reporting an increase in the itchiness she felt, but the patches of psoriasis were a little less noticeable. By three-quarters of the way through the treatment, the itchiness had diminished, some of the scaly skin was peeling off and fresh, pink skin was visible at the sites. By the time the treatment was terminated, although she claimed to have a couple of small patches of psoriasis (which also seemed to be healing) in places hidden by her clothing, none were visible. Moreover, she did not appear self-conscious, she reported feeling comfortable around people and she had joined a couple of recreational groups with other women.

Was this a cure of the psoriasis? Who knows? Felicity has not seen Patsy or the few other people he has treated for psoriasis since completion of their treatments. Since all had claimed that this was the first time in their adult lives they had been free from psoriasis, it seems likely to Felicity that they would have returned to see him if the psoriasis had recurred.

An Anti-Histaminic Auntie-Body

It was mentioned earlier in this chapter that allergies are a product of three things: perhaps a genetic predisposition which, if present, is immutable, the availability of the noxious substance or the allergen in the environment, and the stress-related reactivity of the target cells which react to the allergen. There is little that anyone can do about a person's existing genetic inheritance and, aside from living in an environmentally controlled glass house, there is little that can be done about the seasonal presence of allergens. In fact, the allergists' and homeopaths' use of diluted doses of the allergen to desensitize the sufferer's allergic reactivity is really an 'in vivo' process of stimulating a limited, sub-clinical reaction to allow the body to habituate non-reactivity. That's right, they set out to unlearn the immune-allergic reaction. And this method does not work all that well with many people for a number of specifiable reasons.

Felicity has treated several people's allergies by systematic desensitization (Wolpe's RIT or Quirk's SCARS method) or hypnotic procedures. These may be boring. A story about a person treated by a more 'modern' (NLP) technique might be more interesting.

Primula had suffered from hay fever and asthma for many years, sometimes accompanied by itchy skin. These were reactions to cats, house dust and tree or grass spores. She was uncomfortable inside or outside, or anywhere near cats -- which she adored.

Felicity pointed out to her that there was no real 'danger' from any of her three allergens. She acknowledged that, but said she nevertheless reacted to them. Felicity pointed out that, since

there was nothing dangerous about them, her brain must be making a mistake in maintaining its vigilant readiness to react to their presence with reactivity of the target allergic cells in her body. She agreed. He asked her how they might get her brain to react to these allergens as though they were harmless. She didn't know.

He asked Primula to tell him, if she knew, what it was about cats that she sensed or received and reacted to -- any picture of what it looked like from the recesses of her mind would be fine, no matter how 'silly' it may seem. She said she imagined that what she reacted to about cats looked like little spirals -- like curly hairs, except they spiralled to a point like a cone. They were black, and the point on their ends would catch onto skin or mucous tissue and irritate it by tickling. Felicity was pleased, and he asked her to put that image up on a shelf. He then asked her what else she could think of which was small, looked like that, but had no unpleasant effect on her at all -- in fact, she liked it. After some thought, she said she thought of tiny cone-shaped sea shells which had black mother-of-pearl all over them. Felicity was delighted and he asked her to put that image up on the shelf too.

He then asked Primula what particles of the house dust that afflicted her looked like. The image was of little irregular black things with hairs coming off them which could stick to tissue and irritate it. The similar but pleasant and non-irritating image was of particles of smooth black coal dust from a particular fireplace which she had liked as a child. Those were put up on the shelf. Then he asked about tree and grass spores. They looked to her like tiny green balls with little spines out from them which would stick

into tissue and irritate it. The similar but pleasant and non-irritating image was of little green sparkles which one might spray on a Christmas tree and that would stick there to make the tree bright. Those were also put up on the shelf.

She was asked to close her eyes and picture herself in a room divided in half by an impenetrable, transparent plexiglass screen stretching from ceiling to floor and from wall to wall. Closed doors from a common hall accessed each half of the room. She was asked to watch from her partitioned off half of the room while little black, cone-shaped spirals from a cat were released in the other half of the room. How did she feel? "Fine." She was asked to arrange for a frame, like a picture frame, to be put around the area containing the spirals. Then she was asked to compress the frame with its contents to the size of a picture frame, and then to push the frame and its contents back against the far wall. She accomplished this image. Then she was asked to arrange for a whole lot of tiny black, cone-shaped, mother-of-pearl covered sea shells to be flung lightly into the frame with the spirals of hair. As the sea shells moved toward the frame, air currents sucked the air out of them so that when they reached the frame the spirals of hair were sucked into them and gobbled up. She said she could really see that happening and had already anticipated that occurrence.

When the spirals of hair were thus imprisoned, she was asked to watch herself entering through the door into the other half of the room, pausing and looking around. She was asked to say how she in the other half of the room appeared to feel. She said that she appeared to feel just fine. She was asked to watch herself in

the other half of the room walk up to the frame to look closely at it. How did she feel? She felt OK. She watched herself in the other half of the room, as she reached out, touched and caressed the black things in the frame. How did she feel? She reported no feeling at all. She was asked to walk into the other half of the room, join herself in there, and do the same things. How did she feel. No feeling at all was reported. Felicity was delighted. He suggested that she take a handful of the black shells, put them in her purse and take them home with her as a souvenir. She giggled as she complied in her mind with that idea.

The same procedure was then done, first using the black spiny house dust neutralized by the black shiny coal dust particles, and then using the green spiny spores neutralized by the green shiny sparkles for the Christmas tree. She claimed no distress at all picturing herself in the other half of the room after each of these exercises. She even said she had fun doing the procedures.

In the year which has elapsed since this procedure was undertaken, Primula claims never once to have suffered from any allergic responses, neither hay fever, nor asthma, nor itchiness. This has been true although she has spent a lot of time in houses with cats, in dusty houses and walking outside on the grass and under trees. Was this a 'cure'? In the case of allergic responses, Felicity is inclined to believe that it was 'a cure'. The method seems quite directly to correct the error made by the brain in reacting to the allergens as if they represented danger.

The problem many people might have in accepting this as a real treatment method is likely to be that the brain would be thought to

be incapable of detecting the presence of the allergen consciously. How, then, could it learn to react differentially to the presence of the allergen? The problem here is that most people assume that the brain is only capable of learning responses of which it is conscious. The error in this idea is demonstrated by observing that a cat (only) allergy responds to a cat but not to a dog, even if the person cannot detect consciously whether there is a cat or a dog in the house. The body makes the discrimination, mediated by the brain which triggers and orchestrates the immune reaction.

A Dietetic Diabetic

Of course, diabetes is a horse of a different colour. It is also said to be a chronic disease for which there is no cure. All the term 'chronic disease' means is that it does not yield to 'initial cause' analysis -- the only kind of approach to people's problems physicians are trained in or understand. That is, for medicine it is 'chronic' and has no cure. Fortunately, these days we are not restricted to medical means for treating problems. So, what physicians are unable to understand and cure, may well be cured by methods used by other disciplines. Moreover, Felicity is one of those people who, if you tell him there is no cure for something, he will not rest until he has found at least one cure. And, if there is one cure, there will almost certainly be more than one which might be found.

So, when Paula came to see Felicity saying she had diabetes, he immediately began to ruminate about how he might find a way to cure it. Of course, that wasn't why Paula had come to see him.

She had accepted, as if it was fact, what she had been told by her physician, namely, that there was no cure for diabetes. What she came to see Felicity about was her stress reactivity. She had been told by her physician that the reason why she was unable to control her blood sugar, in spite of good dietary habits and energetic exercise, was because she was suffering from chronic stress. Perhaps a psychologist could help her to reduce her stress reactivity, and thus help her to control her blood sugar.

Paula pushed the right button in Felicity's soul. She spoke of the strict diet she had been given, and with which she had been complying. All of Felicity's sympathies were aroused. Some people like to taste good food. Felicity is ravenous about it. He takes the time to pass it quickly over his palate so that he can get to the next delicate morsel as soon as possible. And the thought of skipping desserts and sugary goodies is quite unacceptable to his gluttonous view of life. So he had to find some way to get Paula over her diabetic disadvantage. But how?

Her diagnosis was Diabetes II. Like her father and her grandmother, she developed her elevated blood sugar in her late fifties. She had been told that there was a strong genetic link in Diabetes II, and so she assumed that her 'disease' was an inherited one. That seemed to be an end to the question about whether or not it could be cured -- it could not. Now Felicity knew that all the genetic factor would do would be to create a pre-disposition to the development of the condition. He realized that it was possible that excessive use of sugars might potentiate the pre-disposition. But a pre-disposition to what?

Unlike Diabetes I where insufficient insulin is produced and exogenous insulin (medication) usually has to be taken, the problem in Diabetes II has more to do with the utilization of the available insulin at the level of the cells. The insulin production may be low, but there is enough present if it could be utilized to help the cells metabolize sugar. How was it that the body could not utilize its insulin?

He noted that Diabetes II, or late onset diabetes, usually starts at about the time of the involutinal period -- the time of life called the menopause in women. Now insulin is a hormone. At that time of life a lot of bodily hormones tend to become less available to the body in both genders. Moreover, the production and utilization of most hormones tend to be triggered and facilitated by other hormones. The idea that a reduction of hormonal stimulants, to maintain the effects of other hormones, might be a relevant issue seemed justified by the observation that the other main time during which Diabetes II tends to be stimulated is during pregnancy. During pregnancy, the body's hormones undergo major changes. Felicity asked Paula to have her physician obtain assays on various blood hormones.

Although the hormone assays showed that several of her hormone levels were well below normal, her physician was unwilling to prescribe hormone supplements to see if they might have any effect on her insulin utilization. Felicity was not discouraged. Paula's body used to utilize its hormones adequately. How could it be induced to produce and utilize enough of this hormone again?

The master endocrine gland, the pituitary body, is located in

the brain. That suggested that the triggering sequences for most of the endocrine system might be capable of being re-regulated habitually by the brain. For this reason, and to address to the referral request, twenty-two sessions of Quirk's stimulus conditioned autonomic response suppression (SCARS) were used. Her subjective sense of stress and anxiety declined appreciably.

But that might respond to only half of the problem. The endocrine organs are chemical factories which produce chemical hormones. It might be necessary to provide the body with some of the chemicals needed to produce the required substances. That suggested the probability that nutritional supplements might be needed. Felicity poked around in the nutritional literature.

Paula started taking 200 micrograms of chromium (replacing that with magnesium when the chromium started making her 'feel sick') which, as in many people, seemed to bring her blood sugar down somewhat and to help stabilize it. The literature suggested the use of a number of other substances (such as an amino acid, arginine, to stimulate insulin production and aid fat metabolism) which were unavailable. He did manage to locate one of these substances for her, called Vanadyl Sulfate. Like most diabetics, she was monitoring her blood sugar daily. Whenever her blood sugar started to rise, she took a couple of the Vanadyl pills. In this way, she managed to keep her blood sugar from fluctuating too greatly and only moderately above 'normal' limits. But her blood sugar level was not yet normalized.

At first Felicity was annoyed that he was unable to find out what would happen if Paula's diminished hormone production were

increased by medication. Then, while listening to Paula talk about her life, something she said kept running through his mind. She noted that her sexual appetites were lower than in the past and that her sexual activity had declined to the point of virtual non-existence. It occurred to him that reduction of sexual activity might itself reduce the stimulation of at least the sex hormones. He asked whether her sexual activity could be increased. Later, she reported that although her husband had accepted the idea of increased activity at first, the activity remained sporadic. In response to a question about how that might be corrected, she thought she might regulate it herself and increase its frequency and consistency. Within a few weeks of commencing daily self-stimulation activity she reported that her blood sugar had stabilized itself within the upper limits of the 'normal' range.

Was this a 'cure'? Felicity doesn't know. The above results having held for several months, Felicity's contact with Paula ceased and he does not know whether the effect remained. Sadly, learning about how the body works and how its conditions can best be treated is slow since most of the available research funds tend to be gobbled up by medical studies. Oh well, perhaps some day ...

Chapter 16

A Quick Look at Brain Damage

Introduction -- Impairing Impairment

This is a volume about psychotherapy. So what on earth has brain damage to do with that? The answer you might expect is that some psychotherapists try to help people 'live with' impairments resulting from their brain damage. Of course, Felicity won't do anything normal or expected -- probably intending to exercise his temperamental obstinacy. So, just for the fun of it, let's look into whatever lunacy he has in store for us now.

A Wobbly Wonder

While walking down the wide hospital corridors, Tracy staggered so much that she bumped into both walls within any stretch of ten feet. Her psychiatric diagnosis was also schizophrenia. That wasn't the problem. She was brain injured. Of course, 'organicity' (I suppose that's a city made up of organs, though it doesn't say what kind of organs) was added to the diagnosis to represent the neurological condition. The history she was able to give offered no clear indication about her past or about any injuries she might have suffered. But there was no doubt she was a 'mal-coord'. Felicity thought it might be fun to try to treat this schizophrenia with a strange method too.

About the time that Tracy was admitted to the Behaviour Therapy Unit, Felicity happened to get lost down in the out-patient department. While trying to find his way out, he opened a door and looked into a room. The room turned out to be one of those observation rooms with a one-way screen. Sitting on a table in front of the screen was a funny-looking board on which there were 100 push-buttons arranged in 10 rows by 10 columns. There was a wire from the board to a twenty-pen pen-recorder. Felicity's sharp mind needed only ten minutes of cocked-headed contemplation of this contraption to deduce that it was probably an interaction recorder for group therapy -- where the observer could hold down a button, for example, in row 6 and column 3 (causing appropriate deflections in two of the pen-recorder's pens) to indicate that, for the period of time of the pens' deflections, person 6 was talking to person 3. The thing that interested Felicity most about this equipment was that it had about a half an inch of dust collected on it. It took only another five minutes of what for Felicity passes as thought, for him to figure out that the equipment had not been used for at least a short time.

So it was that when, several days later, he was interviewing his new patient, Tracy, he put her mal-coordination together with the equipment he had so recently seen and he beamed a triumphant smile toward the not-too-attentive-looking hapless lady he had just received under his tender care. After doing a few tests to document her impoverished coordination and gleaning what little information she could afford him, he dismissed her back to the Unit and hurried off to try to find the out-patient department again.

By chance, he found it. By chance also, he found someone there who looked about as lost as he was, asked this person (probably a patient) if he could borrow the interaction-recording device and, receiving the person's permission to take anything he wanted, he scooped up the equipment and ran back to his office. Once there, he locked the door, dusted off his wonderful new stolen property, and hid it under his desk. The days passed and he was unable to discern any posse out to catch the miscreant. So, looking as though he was doing something completely normal, he secreted his ill-gotten gains under his arm and ran it up to his nurse's room. He abandoned it there so it would look as though she had stolen it if anybody came looking for it. The next day, he purloined his family's metronome on the way to work and added it to the pile to complete the equipment that would be needed for Tracy's treatment.

The nurse was a much nicer person than Felicity had any right to expect. She accepted the new imposition on her time with amazing grace. Felicity asked her to sit with Tracy for two half-hour periods each day, morning and afternoon, to help Tracy with the task he wanted her to do. At first, the metronome was to be set at a very slow rate. It was to be speeded up slowly at each new session only if Tracy was able to keep time with it fairly accurately. Tracy's task was to push on just one of the buttons in time with the metronome and, as if it might be a reward, to watch the deflections of the associated pair of pens on the pen-recorder. She would be able to see how evenly she timed the pushing of the key, and both the nurse and Felicity would be able to evaluate later how she was doing by looking at the lengths of the lines

between pen deflections on the recorder's paper tape.

The treatment began, and Felicity kept track of how Tracy was doing by looking over the paper tape after each session. He could see both the regularity of Tracy's button pushing, its accuracy (from the pens which deflected -- showing which button had been pressed), and the speed of the tapping she was doing (from the distance between pen deflections). As soon as she was doing as well as he thought she should, he asked the nurse to get her to push two side-by-side buttons, alternating back-and-forth between them, starting again at a slow beat from the metronome.

Tracy was about as clumsy as she should have been at the beginning of this task, but she slowly improved and she improved all over again at each new setting of the metronome. When she had mastered an even and rapid tapping between the two buttons, Felicity asked the nurse to get her to tap around a triangle of three buttons, again starting at a slow beat of the metronome. The nurse became a little edgy at this point, remarking that she felt a bit like the person beating the drum to set the rowing rate for the slaves in a Spanish galleon. Nevertheless, she did continue with the task.

As it turned out, it seems that the triangular motion afforded the level of complexity needed by Tracy's brain. As she began to master this intricate three-button manoeuvre, Tracy's overall coordination began to improve. She started walking the halls on legs about as steady as those of a person mildly drunk. She could help a little in combing her own hair. Her speech became less slurred. She had much less trouble finding her words in

conversation. And she was able to eat with the rest of the ladies on the Unit, since she became almost accurate in transporting food to her mouth most of the time.

Finally, she satisfied Felicity that she had mastered the triangular movement at a reasonable rate of speed. By this time, her gait no longer looked at all drunk, she was eating with some delicacy, she was combing her own hair with modest success, and she was even seen to clap her hands just like a normal person in response to some entertainment she was watching. She seemed like any ordinary person. However, Felicity had learned to doubt his own judgement about people's normalcy. The question in his mind was whether her schizophrenic symptoms were now more clearly visible, being less masked by her 'organic' mal-coordination.

She was presented at conference at Felicity's request. Those attending the conference were asked to determine the symptoms most needing treatment at this time. The conference concluded that she had recovered from her schizophrenic illness and her 'organicity' and that she could be discharged. While sharing farewells with her when she was leaving the hospital, Felicity felt robbed of the opportunity to treat her schizophrenia. But she didn't seem to share his disappointment. Felicity could never understand people.

Follow-up interviews were held over a period of only six months since she planned to move out of the vicinity. However, during that time she remained well-coordinated and appeared to function adequately without medication or continuing psychotherapy. Did Tracy recover? And, if she did, how? Was she putting on an act? Only a person living in some remote place can answer these

questions, and perhaps she doesn't know either.

An Uncertain Certainty

Trina was a girl in her mid-teens who had been blind from birth. Her parents brought her to see Felicity because, as they put it, 'she was afraid of the darkness in which she lived'. Felicity had to meet this girl. "How," he thought, "can a person fear the dark when it is the only thing she has ever known?" His question was answered as soon as he saw Trina. She was markedly uncoordinated, presumably related to cerebral palsy (CP).

A blind person has to organize the world in which he/she lives by organizing her movements (kinaesthetic muscle sensations) and her contacts (tactile sensations) in and with it. Trina's lurching and poorly coordinated actions would necessarily create highly unpredictable contacts with the things around her and thus an image of unpredictable relationships among those things in space. The result would have to be a high level of uncertainty and thus ambiguousness in her world. And ambiguity is the universal source of fear -- everybody experiences fear in ambiguous situations.

Felicity did not know what he could do to help her to feel less anxious since his methods used visual images. But he thought he might be able to diminish the spasticity of her movements. The hypothesis he had was that irritability of her brain (see later) might account for her spastic movements. If that were true, then reducing the brain's irritability might correct the spasticity of her movements. She might then be able to organize her world better by means of movement and touch, and the fear of 'her darkness'

should subside. Actually, Felicity had tried, with some success, to reduce the spastic movements interfering with Tom's life -- another CP patient Felicity had treated a year or so earlier.

Sterman's biofeedback treatment method, which had been used with Chester, was started with Trina. Two EEG electrodes were attached near the C3-C4 sites on her scalp. Then, every time any sensorimotor rhythm (SMR) was recorded in the EEG, a whistling sound was turned on automatically, and it lasted as long as there was SMR activity being recorded from the sites. There were about ten half-hour sessions, during which Felicity observed some learned increase in the amount of SMR activity in Trina's EEG.

After about the tenth session, Trina reported some strange sensations. Her mother took her to her physician. He examined her and declared to them that Trina could now 'see' -- that she had 20/200 vision (meaning that she could see at 20 feet what the normal person can see at 200 feet). Everyone was shocked at this unexpected development. But the expected joyous consequences were not to be. Indeed, it looked as though this silver lining was little more than a cloud.

Trina had been told she could see. Therefore, she concluded, it was no longer necessary for her attend the school for the blind. But she could not see. Her eyes, never having been fixated by light, roamed randomly around in their sockets. It is true that, as they passed any particular patch or shape of colour around her, she could distinguish the patch of colour -- as different from another patch of a different colour or shape. But her eyes had not imprinted the skills of fixation on an object, tracking an object,

focusing on an object or even accommodating to the amount of light -- skills learned in the first weeks of life. And now, not having had these skills imprinted at the early 'easy' age, they would be hard, if not impossible, to learn at this age.

Moreover, if Trina had been fearful of the darkness in which she lived before, she was now even more fearful of Felicity who had done this thing to her. She would not continue to visit Felicity to see if her eyes could be trained to perform their normal functions -- which would permit her not only to have vision, but also to see. And she was in her mid-teens, an age at which young girls tend to begin to become independent of their mothers. She only felt a more intense need to rely on her mother, thus increasing her sense of inner conflict.

All Felicity could do under the circumstances was to feel a great sense of remorse for his part in creating the new distress this young lady was experiencing, and to instruct her mother in methods by which to train her daughter's eyes to serve her in the task of seeing. Since there was no further contact with the family, Felicity has remained remorseful for his part in creating fear in her but, hopefully, wiser.

This story can hardly be left without some kind of an explanation. Is it intended to imply that some magic or a miracle occurred? It is not. Although the following 'explanation' can hardly be stated as having established validity, it does provide a kind of plausible understanding of the events described.

First, some definitions are needed. Focal epilepsy refers to epilepsy affecting a specific area or group of nerves in the brain.

Non-focal or general epilepsy refers to epilepsy affecting a wider area or a large number of nerves in the brain. Status epilepticus refers to a fairly constant state of epileptic discharge or of 'short-circuiting' in the brain. It is possible that a general form of status epilepticus might be occurring in Trina's brain as a result of the widespread nature of her CP symptoms or, say, a birth injury. This could well be initiated from a focal discharge affecting a specific set of nerve tracts, such as those leading to the visual cortex from the eye. This, in turn, might continuously interfere with the transmission of nerve impulses, such as retinal impulses, thus effectively preventing vision. This might happen, for example, if the foetus came equipped, or developed, weak access to neural inhibition for at least that specific area. This might be one way to account for blindness in some people whose eyes and optic nerves are intact, but who are said to suffer from 'nerve blindness'.

If this explanation is valid, then trained increase in sensorimotor rhythm (SMR) in the EEG might result in an increased access to neural inhibition throughout the brain. This, in turn, might prevent the uncoordinated brain activity underlying the CP symptoms. At least, that was the idea Felicity had in starting out to treat the CP symptoms with EEG-SMR training. What may have happened before the desired effect was achieved, however, is that the threshold amount of neural inhibition, required to prevent the focal epileptic activity on the optic tract, could have become available to block the irritative interference with visual tract transmission, so that vision was no longer prevented. If this

latter effect were to be achieved, vision might develop, even if for the first time.

It will be noticed that the above story is replete with 'ifs'. That was intentional. It is rather hard to verify exactly what is going on in the brain in its moment-to-moment functioning. Since its functioning is mainly comprised of invisible electrical activities which, unlike engineered electrical circuits, cannot be controlled to observe what happens under varied conditions, it is hard to specify exactly what is taking place at any given moment. The only way yet available to discover what might be going on within the brain is to find ways to control the stimuli going in through the sensory tracts and to observe the effects on the system in the resulting behaviour. The abbreviated interval of time available in Trina's case, along with the occurrence of an unpredicted event (vision), prevented any effective test of the above hypotheses. How's that for science fiction!?

A Magnificent Magnification

Terry was seen at a hospital. He was referred for a psychological assessment to measure his degree of impairment and disability. Several years prior to this contact, he had been in a serious traffic accident. His skull had been crushed in the impact and the neurosurgeons had cut out some of his damaged brain and had inserted a steel plate to replace the crushed section of the skull.

When he appeared at Felicity's office, he was limping heavily with his right leg, and his right arm hung limply at his side with the wrist and fingers bent slightly inwards. His conversation was

slow and laboured since it was hard for him to find the words he wanted to use. He could not read any more, at least not well enough to do any questionnaire tests. He wrote in a clumsy way with his left hand, but he made so many spelling mistakes that what he wrote was hard to understand. There was only rather patchy sensation from the right side of his body. And he was subject to frequent grand mal (losing consciousness) and petit mal (fleeting sensory or motor events) seizures. He was clearly putting out massive efforts to continue to function at all.

Terry's brain was damaged beyond repair. He was suffering a severe loss of function as well as periodic debilitation from his epileptic seizures. Felicity wondered why it had been necessary for Terry to be referred to him for the assessment. Dutifully, he undertook some neuropsychological tests with Terry to quantify the impairments and disabilities. Then he phoned the referring physician to provide a preliminary report and to inquire about the reason for the referral -- which would help determine how detailed his report should be. The physician said that he had heard about Felicity and he was hoping that something in Felicity's bag of tricks might help this unfortunate young man. This was an unexpected turn of events and, taken completely off guard, Felicity agreed to see what he could do.

Lashley's Mass Action Hypothesis flitted through Felicity's mind creating a sense of despair. If the amount of impairment of functioning was indeed proportionate to the amount of damaged brain tissue, the massive loss of brain tissue should imply permanent and massive loss of functioning. Certainly, Lashley's hypothesis was

accepted by psychologists and, besides, who could doubt such an obviously correct hypothesis. Felicity's 'mind' focused more and more on the word 'hypothesis' (which means 'guess'), and he began to run over in his mind the contradictory evidence which he had encountered. Lots of patients exhibited huge amounts of impairment of functioning with absolutely no 'visible' brain tissue damage -- this was true in many epileptic cases, for example. Also, there were lots of patients who had large parts of their brains removed surgically without any particularly apparent losses of functioning.

Perhaps a more accurate reformulation of the Mass Action Hypothesis might be that loss of functioning is proportional to the amount of existing brain tissue whose functions are interfered with by continuing irritative (that is, epileptic) brain tissue. That formulation appealed more to Felicity than the earlier one. At least it might justify trying to do something for Terry.

As in Chester's case, Felicity started a biofeedback programme with Terry, using Sterman's method to train increase in SMR, in order to increase the availability of neural inhibition to his brain. Two EEG electrodes were attached to Terry's scalp near the C3-C4 sites -- on the top of the head, about equidistant from each other and from the earlobes. The feedback EEG unit was set to recognize and respond with a whistling sound for all recorded occurrences of sensorimotor rhythm (SMR) activity -- electrical activity from this brain site occurring at between 12 and 14 cycles per second and between 10 and 30 microvolts. The purpose of this whistling sound was to provide a 'reward' for Terry's brain for producing the desired SMR activity. SMR is an EEG activity

representing neural inhibition in the brain. Neural inhibition is one means by which the brain functionally insulates itself to prevent short-circuiting or epileptic or irritative activity from occurring. It was thought that if his brain could learn to increase its production of SMR, it might prevent both his epileptic seizures and any irritative electrical activity which might be interfering with the functioning of undamaged parts of his brain.

Meanwhile, galvanic skin resistance (GSR) electrodes were also attached to Terry's right (that's right, right) hand to measure changes in the amount of sweat of his hand. He was shown pictorial slides which were changed for each successive 1,000 ohms of increase in his GSR level. Quirk's stimulus conditioned autonomic response suppression (SCARS) method, which was described in Sally's case, was used here to train Terry to limit any intense autonomic-anxiety reactions. The purpose of this treatment was both to desensitize any traumatically-conditioned anxiety which might have been left over from the traffic accident, and to prevent the possibility that any autonomic storms might occur and erase any trained increase in SMR production which might be achieved. The EEG-SMR method and the SCARS method were used at the same time.

Terry learned rather slowly to increase both his SMR production and his GSR baseline. But he hung in there. At first he reported a declining rate of epileptic seizures. Then his mood started to lift. As treatment continued, his limp pretty well vanished, and Felicity noticed that he was using his right hand to do some simple tasks. Quite suddenly he found he could read as he

had before the accident. Even more, his spelling suddenly improved. Then he began to write with his right hand so that, by the end of the treatment, he was writing about as smoothly with his right hand as he had learned to write with his left.

What brought about these changes? Again, who knows? It would be nice to think that the treatment served as a test of the revision of the Mass Action Hypothesis which was offered. However, it is possible that the damage to Terry's brain did not account for the impairments of his functioning or for his epilepsy. Although this seems unlikely, it is possible that his epilepsy and his impairments were due to functional (psychological) ways of dealing with anxiety traumatically conditioned in the accident. If this had been true, then the use of anxiety desensitization (with SCARS) may have corrected the anxiety and thus removed the symptoms created by the anxiety. And, of course, this is mentioned really only to suggest that there may have been any number of other unknown reasons why this simple pair of procedures were followed by such radical changes in Terry's functioning and behaviour.

Still, in terms of the conventions of science, if a treatment is introduced under a given hypothesis, and if the treatment does as it was hypothesized to do, the hypothesis on the basis of which the treatment was undertaken is afforded increased credibility or validity over other possible hypotheses. It may just be that some symptomatic consequences (mal-functioning or impairment of functioning) of some, even irreversible, brain damage may be modifiable or reversible given appropriate treatment procedures.

Still, who knows what happened or, for that matter, what is

possible? Felicity doesn't. Perhaps due to his normally semi-conscious state, Felicity believes in the unconscious mind which, however, he designates as the, almost limitless, 'realm of the possible'.