## **Stranger in Paradise**

Isaac Asimov

1

They were brothers. Not in the sense that they were both human beings, or that they were fellow children of a creche. Not at all! They were brothers in the actual biological sense of the word. They were kin, to use a term that had grown faintly archaic even centuries before, prior to the Catastrophe, when that tribal phenomenon, the family, still had some validity.

How embarrassing it was! Over the years since childhood, Anthony had almost forgotten. There were times when he hadn’t given it even the slightest thought for months at a time. But now, ever since he had been inextricably thrown together with William, he had found himself living through an agonizing time.

It might not have been so bad if circumstances had made it obvious all along; if, as in the pre-Catastrophe days— Anthony had at one time been a great reader of history— they had shared the second name and in that way alone ﬂaunted the relationship.

Nowadays, of course, one adopted one’s second name to suit oneself and changed it as often as desired. After all, the symbol chain was what really counted, and that was encoded and made yours from birth.

William called himself Anti-Aut. That was what he insisted on with a kind of sober professionalism. His own business, surely, but what an advertisement of personal poor taste. Anthony had decided on Smith when he had turned thirteen and had never had the impulse to change it. It was simple, easily spelled, and quite distinctive, since he had never met anyone else who had chosen that name. It was once very common—among the pre-Cats—which explained its rareness now perhaps.

But the diﬀerence in names meant nothing when the two were together. They looked alike.

If they had been twins— but then one of a pair of twin-fertilized ova was never allowed to come to term. It was just that physical similarity occasionally happened in the non-twin situation, especially when the relationship was on both sides. Anthony Smith was ﬁve years younger, but both had the beaky nose, the heavy eyelids, the just noticeable cleft in the chin— that damned luck of the genetic draw. It was just asking for it when, out of some passion for monotony, parents repeated.

At ﬁrst, now that they were together, they drew that startled glance followed by an elaborate silence. Anthony tried to ignore the matter, but out of sheer perversity—or perversion—William was as likely as not to say. “We’re brothers...

“Oh?” the other would say, hanging in there for just a moment as though he wanted to ask if they were full blood brothers. And then good manners would win the day and he would turn away as though it were a matter of no interest. That happened only rarely, of course. Most of the people in the Project knew—how could it be prevented? — and avoided the situation.

Not that William was a bad fellow. Not at all. If he hadn’t been Anthony’s brother; or if they had been, but looked suﬃciently diﬀerent to be able to mask the fact, they would have gotten along famously.

As it was—It didn’t make it easier that they had played together as youngsters, and had shared the earlier stages of education in the same creche through some successful maneuvering on the part of Mother.

Having borne two sons by the same father and having, in this fashion, reached her limit (for she had not fulﬁlled the stringent requirements for a third), she conceived the notion of being able to visit both at a single trip. She was a strange woman.

William had left the creche ﬁrst, naturally, since he was the elder. He had gone into science-genetic engineering. Anthony had heard that, while he was still in the creche, through a letter from his mother. He was old enough by then to speak ﬁrmly to the matron, and those letters stopped. But he always remembered the last one for the agony of shame it had brought him.

Anthony had eventually entered science, too. He had shown talent in that direction and had been urged to. He remembered having had the wild—and prophetic, he now realized—fear he might meet his brother and he ended in telemetrics, which was as far removed from genetic engineering as one could imagine.Or so one would have thought.

Then, through all the elaborate development of the Mercury Project, circumstance waited.

The time came, as it happened, when the Project appeared to be facing a dead end; and a suggestion had been made which saved the situation, and at the same time dragged Anthony into the dilemma his parents had prepared for him. And the best and most sardonic part of the whole thing was that it was Anthony who, in all innocence, made the suggestion.

2.

William Anti-Aut knew of the Mercury Project, but only in the way he knew of the long-drawn-out Stellar Probe that had been on its way long before he was born and would still be on its way after his death; and the way he knew of the Martian colony and of the continuing attempts to establish similar colonies on the asteroids.

Such things were on the distant periphery of his mind and of no real importance. No part of the space eﬀort had ever swirled inward closer to the center of his interests, as far as he could remember, till the day when the printout included photographs of some of the men engaged in the Mercury Project.

William’s attention was caught ﬁrst by the fact that one of them had been identiﬁed as Anthony Smith. He remembered the odd name his brother had chosen, and he remembered the Anthony. Surely there could not be two Anthony Smiths.

He had then looked at the photograph itself and there was no mistaking the face. He looked in the mirror in a sudden whimsical gesture at checking the matter. No mistaking the face.

He felt amused, but uneasily so, for he did not fail to recognize the potentiality for embarrassment. Full blood brothers, to use the disgusting phrase. But what was there to do about it? How correct the fact that neither his father nor his mother had imagination?

He must have put the printout in his pocket, absently, when he was getting ready to leave for work, for he came across it at the lunch hour. He stared at it again. Anthony looked keen. It was quite a good reproduction— the printouts were of enormously good quality these days.

His lunch partner, Marco Whatever-his-name-was-that-week, said curiously, “What are you looking at, William?”

On impulse, William passed him the printout and said, “That’s my brother.” It was like grasping the nettle.

Marco studied it, frowning, and said, “Who? The man standing next to you?”

“No, the man who *is* me. I mean the man who looks like me. He’s my brother.”

There was a longer pause this time. Marco handed it back and said with a careful levelness to his voice, “Same-parents brother?”

“Yes.”

“Father and mother both.”

“Yes.”

“Ridiculous!”

“I suppose so.” William sighed. “Well, according to this, he’s in telemetrics over in Texas and I’m doing work in autistics up here. So what diﬀerence does it make?”

William did not keep it in his mind and later that day he threw the printout away. He did not want his current bedmate to come across it. She had a ribald sense of humor that William was ﬁnding increasingly wearying. He was rather glad she was not in the mood for a child. He himself had had one a few years back anyway. That little brunette, Laura or Linda, one or the other name, had collaborated.

It was quite a time after that, at least a year, that the matter of Randall had come up. If William had given no further thought to his brother—and he hadn’t—before that, he certainly had no time for it afterward.

Randall was sixteen when William ﬁrst received word of him. He had lived a life that was increasingly seclusive and the Kentucky creche in which he was being brought up decided to cancel him and of course it was only some eight or ten days before cancellation that it occurred to anyone to report him to the New York Institute for the Science of Man. (The Homological Institute was its common name.)

William received the report along with reports of several others and there was nothing in the description of Randall that particularly attracted his notice. Still it was time for one of his tedious masstransport trips to the creches and there was one likely possibility in West Virginia. He went there— and was disappointed into swearing for the ﬁftieth time that he would thereafter make these visits by TV image— and then, having dragged himself there, thought he might as well take in the Kentucky creche before returning home.

He expected nothing.

Yet he hadn’t studied Randall’s gene pattern for more than ten minutes before he was calling the Institute for a computer calculation. Then he sat back and perspired slightly at the thought that only a last- minute impulse had brought him, and that without that impulse, Randall would have been quietly canceled in a week or less. To put it into the ﬁne detail, a drug would have soaked painlessly through his skin and into his bloodstream and he would have sunk into a peaceful sleep that deepened gradually to death. The drug had a twenty-three- syllable oﬃcial name, but William called it “nirvanamine,” as did everyone else.

William said, “What is his full name, matron?”

The creche matron said, “Randall Nowan, scholar.”

“No one!” said William explosively.

“Nowan.” The matron spelled it. “He chose it last year.”

“And it meant nothing to you? It is pronounced No one! It didn’t occur to you to report this young man last year?”

“It didn’t seem—” began the matron, ﬂustered.

William waved her to silence. What was the use? How was she to know? There was nothing in the gene pattern to give warning by any of the usual textbook criteria. It was a subtle combination that William and his staﬀ had worked out over a period of twenty years through experiments on autistic children— and a combination they had never actually seen in life.

So close to canceling!

Marco, who was the hardhead of the group, complained that the creches were too eager to abort before term and to cancel after term. He maintained that all gene patterns should be allowed to develop for purpose of initial screening and there should be no cancellation at all without consultation with a homologist.

“There aren’t enough homologists,” William said tranquilly.

“We can at least run all gene patterns through the computer,” said Marco.

“To save anything we can get for our use?”

“For any homological use, here or elsewhere. We must study gene patterns in action if we’re to understand ourselves properly, and it is the abnormal and monstrous patterns that give us most information. Our experiments on autism have taught us more about homology than the sum total existing on the day we began.”

William, who still liked the roll of the phrase “the genetic physiology of man” rather than “homology,” shook his head. “Just the same, we’ve got to play it carefully. However useful we can claim our experiments to be, we live on bare social permission, reluctantly given. We’re playing with lives.”

“Useless lives. Fit for canceling.”

“ A quick and pleasant canceling is one thing. Our experiments, usually long drawn out and sometimes unavoidably unpleasant, are another.”

“We help them sometimes.”

“ And we don’t help them sometimes.”

It was a pointless argument, really, for there was no way of settling it. What it amounted to was that too few interesting abnormalities were available for homologists and there was no way of urging mankind to encourage a greater production. The trauma of the Catastrophe would never vanish in a dozen ways, including that one.

The hectic push toward space exploration could be traced back (and was, by some sociologists) to the knowledge of the fragility of the life skein on the planet, thanks to the Catastrophe.

Well, never mind.

There had never been anything like Randall Nowan. Not for William. The slow onset of autism characteristic of that totally rare gene pattern meant that more was known about Randall than about any equivalent patient before him. They even caught some last faint glimmers of his way of thought in the laboratory before he closed oﬀ altogether and shrank ﬁnally within the wall of his skin—unconcerned, unreachable.

Then they began the slow process whereby Randall, subjected for increasing lengths of time to artiﬁcial stimuli, yielded up the inner workings of his brain and gave clues thereby to the inner workings of all brains, those that were called normal as well as those like his own.

So vastly great was the data they were gathering that William began to feel his dream of reversing autism was more than merely a dream. He felt a warm gladness at having chosen the name Anti-Aut.

And it was at almost the height of the euphoria induced by the work on Randall that he received the call from Dallas and that the heavy pressure began— now, of all times— to abandon his work and take on a new problem.

Looking back on it later, he could never work out just what it was that ﬁnally led him to agree to visit Dallas. In the end, of course, he could see how fortunate it was— but what had persuaded him to do so?

Could he, even at the start, have had a dim unrealized notion of what it might come to? Surely, impossible.

Was it the unrealized memory of that printout, that photograph of his brother? Surely, impossible.

But he let himself be argued into that visit and it was only when the micro-pile power unit changed the pitch of its soft hum and the agrav unit took over for the ﬁnal descent that he remembered that photograph—or at least that it moved into the conscious part of his memory.

Anthony worked at Dallas and, William remembered now, at the Mercury Project. That was what the caption had referred to. He swallowed, as the soft jar told him the journey was over. This would be uncomfortable.

3.

Anthony was waiting on the roof reception area to greet the incoming expert. Not he by himself, of course. He was part of a sizable delegation—the size itself a rather grim indication of the desperation to which they had been reduced—and he was among the lower echelons. That he was there at all was only because it was he who had made the original suggestion.

He felt a slight, but continuing, uneasiness at the thought of that. He had put himself on the line. He had received considerable approval for it, but there had been the faint insistence always that it was *his* suggestion; and if it turned out to be a ﬁasco, every one of them would move out of the line of ﬁre and leave him at point-zero.

There were occasions, later, when he brooded over the possibility that the dim memory of a brother in homology had suggested his thought. That might have been, but it didn’t have to be. The suggestion was so sensibly inevitable, really, that surely he would have had the same thought if his brother had been something as innocuous as a fantasy writer, or if he had had no brother of his own.

The problem was the inner planets—The Moon and Mars were colonized. The larger asteroids and the satellites of Jupiter had been reached, and plans were in progress for a manned voyage to Titan, Saturn’s large satellite, by way of an accelerating whirl about Jupiter. Yet even with plans in action for sending men on a seven-year round trip to the outer Solar System, there was still no chance of a manned approach to the inner planets, for fear of the Sun.

Venus itself was the less attractive of the two worlds within Earth’s orbit. Mercury, on the other hand

Anthony had not yet joined the team when Dmitri Large (he was quite short, actually) had given the talk that had moved the World Congress suﬃciently to grant the appropriation that made the Mercury Project possible.

Anthony had listened to the tapes, and had heard Dmitri’s presentation. Tradition was ﬁrm to the eﬀect that it had been extemporaneous, and perhaps it was, but it was perfectly constructed and it held within it, in essence, every guideline followed by the Mercury Project since.

And the chief point made was that it would be wrong to wait until the technology had advanced to the point where a manned expedition through the rigors of Solar radiation could become feasible. Mercury was a unique environment that could teach much, and from Mercury’s surface sustained observations could be made of the Sun that could not be made in any other way.—Provided a man substitute— a robot, in short— could be placed on the planet.

A robot with the required physical characteristics could be built. Soft landings were as easy as kiss-my-hand. Yet once a robot landed, what did one do with him next?

He could make his observations and guide his actions on the basis of those observations, but the Project wanted his actions to be intricate and subtle, at least potentially, and they were not at all sure what observations he might make.

To prepare for all reasonable possibilities and to allow for all the intricacy desired, the robot would need to contain a computer (some at Dallas referred to it as a “brain,” but Anthony scorned that verbal habit— perhaps because, he wondered later, the brain was his brother’s ﬁeld) suﬃciently complex and versatile to fall into the same asteroid with a mammalian brain.

Yet nothing like that could be constructed and made portable enough to be carried to Mercury and landed there— or if carried and landed, to be mobile enough to be useful to the kind of robot they planned.

Perhaps someday the positronic-path devices that the roboticists were playing with might make it possible, but that someday was not yet.

The alternative was to have the robot send back to Earth every observation it made the moment it was made, and a computer on Earth could then guide his every action on the basis of those observations. The robot’s body, in short, was to be there, and his brain here.

Once that decision was reached, the key technicians were the telemetrists and it was then that Anthony joined the Project. He became one of those who labored to devise methods for receiving and returning impulses over distances of from 50 to 40 million miles, toward, and sometimes past, a Solar disk that could interfere with those impulses in a most ferocious manner.

He took to his job with passion and (he ﬁnally thought) with skill and success. It was he, more than anyone else, who had designed the three switching stations that had been hurled into permanent orbit about Mercury— the Mercury Orbiters. Each of them was capable of sending and receiving impulses from Mercury to Earth and from Earth to Mercury. Each was capable of resisting, more or less permanently, the radiation from the Sun, and more than that, each could ﬁlter out Solar interference.

Three equivalent Orbiters were placed at distance of a little over a million miles from Earth, reaching north and south of the plane of the Ecliptic so that they could receive the impulses from Mercury and relay them to Earth—or vice versa—even when Mercury was behind the Sun and inaccessible to direct reception from any station on Earth ‘ s surface.

Which left the robot itself; a marvelous specimen of the roboticists’ and telemetrists’ arts in combination. The most complex of ten successive models, it was capable, in a volume only a little over twice that of a man and ﬁve times his mass, of sensing and doing considerably more than a man— if it could be guided.

How complex a computer had to be to guide the robot made itself evident rapidly enough, however, as each response step had to be modiﬁed to allow for variations in possible perception. And as each response step itself enforced the certainty of greater complexity of possible variation in perceptions, the early steps had to be reinforced and made stronger. It built itself up endlessly, like a chess game, and the telemetrists began to use a computer to program the computer that designed the program for the computer that programmed the robot-controlling computer.

There was nothing but confusion. The robot was at a base in the desert spaces of Arizona and in itself was working well. The computer in Dallas could not, however, handle him well enough; not even under perfectly known Earth conditions. How then

Anthony remembered the day when he had made the suggestion. It was on 7-4-553. He remembered it, for one thing, because he remembered thinking that day that 7-4 had been an important holiday in the Dallas region of the world among the pre-Cats half a millennium before— well, 553 years before, to be exact.

It had been at dinner, and a good dinner, too. There had been a careful adjustment of the ecology of the region and the Project personnel had high priority in collecting the food supplies that became available—so there was an unusual degree of choice on the menus, and Anthony had tried roast duck.

It was very good roast duck and it made him somewhat more expansive than usual. Everyone was in a rather self-expressive mood, in fact, and Ricardo said, “We’ll never do it. Let’s admit it. We’ll never do it.”

There was no telling how many had thought such a thing how many times before, but it was a rule that no one said so openly. Open pessimism might be the ﬁnal push needed for appropriations to stop (they had been coming with greater diﬃculty each year for ﬁve years now) and if there *were* a chance, it would be gone.

Anthony, ordinarily not given to extraordinary optimism, but now reveling over his duck, said, “Why can’t we do it? Tell me why, and I’ll refute it.”

It was a direct challenge and Ricardo’s dark eyes narrowed at once. “You want me to tell you why?”

“I sure do.” Ricardo swung his chair around, facing Anthony full. He said, “Come on, there’s no mystery. Dmitri Large won’t say so openly in any report, but you know and I know that to run Mercury Project properly, we’ll need a computer as complex as a human brain whether it’s on Mercury or here, and we can’t build one. So where does that leave us except to play games with the World Congress and get money for make-work and possibly useful spin-oﬀs?”

And Anthony placed a complacent smile on his face and said, “That’s easy to refute. You’ve given us the answer yourself.” (Was he playing games? Was it the warm feeling of duck in his stomach? The desire to tease Ricardo?...Or did some unfelt thought of his brother touch him? There was no way, later, that he could tell.)

“What answer?” Ricardo rose. He was quite tall and unusually thin and he always wore his white coat unseamed. He folded his arms and seemed to be doing his best to tower over the seated Anthony like an unfolded meter rule. “What answer?”

“You say we need a computer as complex as a human brain. All right, then, we’ll build one.”

“The point, you idiot, is that we can’t—”

“*We* can’t. But there are others.”

“What others?”

“People who work on brains, of course. We’re just solid-state mechanics. We have no idea in what way a human brain is complex, or where, or to what extent. Why don’t we get in a homologist and have *him* design a computer?” And with that Anthony took a huge helping of stuﬃng and savored it complacently. He could still remember, after all this time, the taste of the stuﬃng, though he couldn’t remember in detail what had happened afterward.

It seemed to him that no one had taken it seriously. There was laughter and a general feeling that Anthony had wriggled out of a hole by clever sophistry so that the laughter was at Ricardo’s expense. (Afterward, of course, everyone claimed to have taken the suggestion seriously.)

Ricardo blazed up, pointed a ﬁnger at Anthony, and said, “Write that up. I *dare* you to put that suggestion in writing.” (At least, so Anthony’s memory had it. Ricardo had, since then, stated his comment was an enthusiastic “Good ideal Why don’t you write it up formally, Anthony?”)

Either way, Anthony put it in writing.

Dmitri Large had taken to it. In private conference, he had slapped Anthony on the back and had said that he had been speculating in that direction himself— though he did not oﬀer to take any credit for it on the record. (Just in case it turned out to be a ﬁasco, Anthony thought.)

Dmitri Large conducted the search for the appropriate homologist. It did not occur to Anthony that he ought to be interested. He knew neither homology nor homologists—except, of course, his brother, and he had not thought of him. Not consciously.

So Anthony was up there in the reception area, in a minor role, when the door of the aircraft opened and several men got out and came down and in the course of the handshakes that began going round, he found himself staring at his own face.

His cheeks burned and, with all his might, he wished himself a thousand miles away.

4.

More than ever, William wished that the memory of his brother had come earlier. It should have.Surely it should have.

But there had been the ﬂattery of the request and the excitement that had begun to grow in him after a while. Perhaps he had deliberately avoided remembering.

To begin with, there had been the exhilaration of Dmitri Large coming to see him in his own proper presence. He had come from Dallas to New York by plane and that had been very titillating for William, whose secret vice it was to read thrillers. In the thrillers, men and women always traveled mass-wise when secrecy was desired. After all, electronic travel was public property— at least in the thrillers, where every radiation beam of whatever kind was invariably bugged.

William had said so in a kind of morbid half attempt at humor, but Dmitri hadn’t seemed to be listening. He was staring at William’s face and his thoughts seemed elsewhere. “I’m sorry,” he said ﬁnally. “You remind me of someone.”

(And yet that hadn’t given it away to William. How was that possible? he had eventual occasion to wonder.)

Dmitri Large was a small plump man who seemed to be in a perpetual twinkle even when he declared himself worried or annoyed. He had a round and bulbous nose, pronounced cheeks, and softness everywhere. He emphasized his last name and said with a quickness that led William to suppose he said it often, “Size is not all the large there is, my friend.”

In the talk that followed, William protested much. He knew nothing about computers. Nothing! He had not the faintest idea of how they worked or how they were programmed.

“No matter, no matter,” Dmitri said, shoving the point aside with an expressive gesture of the hand. *“We* know the computers; *we* can set up the programs. You just tell us what it is a computer must be made to do so that it will work like a brain and not like a computer.”

“I’m not sure I know enough about how a brain works to be able to tell you that, Dmitri,” said William.

“You are the foremost homologist in the world,” said Dmitri. “I have checked that out carefully.” And that disposed of that.

William listened with gathering gloom. He supposed it was inevitable.

Dip a person into one particular specialty deeply enough and long enough, and he would automatically begin to assume that specialists in all other ﬁelds were magicians, judging the depth of their wisdom by the breadth of his own ignorance.And as time went on, William

learned a great deal more of the Mercury Project than it seemed to him at the time that he cared to.

He said at last, “Why use a computer at all, then? Why not have one of your own men, or relays of them, receive the material from the robot and send back instructions.”

“Oh, oh, oh,” said Dmitri, almost bouncing in his chair in his eagerness. “You see, you are not aware. Men are too slow to analyze quickly all the material the robot will send back— temperatures and gas pressures and cosmic— ray ﬂuxes and Solar-wind intensities and chemical compositions and soil textures and easily three dozen more items— and then try to decide on the next step. A human being would merely *guide* the robot, and ineﬀectively; a computer would *be* the robot.

“And then, too,” he went on, “men are too fast, also. It takes radiation of any kind anywhere from ten to twenty-two minutes to take the round trip between Mercury and Earth, depending on where each is in its orbit. Nothing can be done about that. You get an observation, you give an order, but much has happened between the time the observation is made and the response returns. Men can’t adapt to the slowness of the speed of light, but a computer can take that into account.Come help us, William.”

William said gloomily, “You are certainly welcome to consult me, for what good that might do you. My private TV beam is at your service.”

“But it’s not consultation I want. You must come with me.”

“Mass-wise?” said William, shocked.

“Yes, of course. A project like this can’t be carried out by sitting at opposite ends of a laser beam with a communications satellite in the middle. In the long run, it is too expensive, too inconvenient, and, of course, it lacks all privacy—”

It *was* like a thriller, William decided. “Come to Dallas,” said Dmitri, “and let me show you what we have there. Let me show you the facilities. Talk to some of our computer men. Give them the beneﬁt of your way of thought.”

It was time, William thought, to be decisive. “Dmitri,” he said, “I have work of my own here. Important work that I do not wish to leave. To do what you want me to do may take me away from my laboratory for months.”

“Months!” said Dmitri, clearly taken aback. “My good William, it may well be years. But surely it will be your work.”

“No, it will not. I know what my work is and guiding a robot on Mercury is not it.”

“Why not? If you do it properly, you will learn more about the brain merely by trying to make a computer work like one, and you will come back here, ﬁnally, better equipped to do what you now consider your work. And while you’re gone, will you have no associates to carry on? And can you not be in constant communication with them by laser beam and television? And can you not visit New York on occasion? Brieﬂy.”

William was moved. The thought of working on the brain from another direction did hit home. From that point on, he found himself looking for excuses to go—at least to visit—at least to see what it was all like.He could always return.

Then there followed Dmitri’s visit to the ruins of Old New York, which he enjoyed with artless excitement (but then there was no more magniﬁcent spectacle of the useless gigantism of the pre-Cats than Old New York).William began to wonder if the trip might not give him an opportunity to see some sights as well.

He even began to think that for some time he had been considering the possibility of ﬁnding a new bedmate, and it would be more convenient to ﬁnd one in another geographical area where he would not stay permanently.

—Or was it that even then, when he knew nothing but the barest beginning of what was needed, there had already come to him, like the twinkle of a distant lightning ﬂash, what might be done

So he eventually went to Dallas and stepped out on the roof and there was Dmitri again, beaming. Then, with eyes narrowing, the little man turned and said, “I *knew—*What a remarkable resemblance!”

William’s eyes opened wide and there, visibly shrinking backward, was enough of his own face to make him certain at once that Anthony was standing before him.

He read very plainly in Anthony’s face a longing to bury the relationship. All William needed to say was “How remarkable!” and let it go. The gene patterns of mankind were complex enough, after all, to allow resemblances of any reasonable degree even without kinship.

But of course William was a homologist and no one can work with the intricacies of the human brain without growing insensitive as to its details, so he said, “I’m sure this is Anthony, my brother.”

Dmitri said, “Your brother?”

“My father,” said William, “had two boys by the same woman—my mother. They were eccentric people.”

He then stepped forward, hand outstretched, and Anthony had no choice but to take it.The incident was the topic of conversation, the only topic, for the next several days.

5.

It was small consolation to Anthony that William was contrite enough when he realized what he had done.

They sat together after dinner that night and William said, “My apologies. I thought that if we got the worst out at once that would end it. It doesn’t seem to have done so. I’ve signed no papers, made no formal agreement. I will leave.”

“What good would that do?” said Anthony ungraciously. “Everyone knows now. Two bodies and one face. It’s enough to make one puke.”

“If I leave—”

“You can’t leave. This whole thing is my idea.”

“To get me here?” William’s heavy lids lifted as far as they might and his eyebrows climbed.

“No, of course not. To get a *homologist* here. How could I possibly know they would send *you?”*

“But if I leave—”

“No. The only thing we can do now is to lick the problem, if it can be done. Then—it won’t matter.” (Everything is forgiven those who succeed, he thought.)

“I don’t know that I can—”

“We’ll have to try. Dmitri will place it on us. It’s too good a chance. You two are brothers,” Anthony said, mimicking Dmitri’s tenor voice, “and understand each other. Why not work together?” Then, in his own voice, angrily, “So we must. To begin with, what is it you do, William? I mean, more precisely than the word ‘homology’ can explain by itself.”

William sighed. “Well, please accept my regrets.I work with autistic

children.”

“I’m afraid I don’t know what that means.”

“Without going into a long song and dance, I deal with children who do not reach out into the world, do not communicate with others, but who sink into themselves and exist behind a wall of skin, somewhat unreachably. I hope to be able to cure it someday.”

“Is that why you call yourself Anti-Aut?”

“Yes, as a matter of fact.”

Anthony laughed brieﬂy, but he was not really amused.

A chill crept into William’s manner. “It is an honest name.”

“I’m sure it is,” muttered Anthony hurriedly, and could bring himself to no more speciﬁc apology. With an eﬀort, he restored the subject, “ And are you making any progress?”

“Toward the cure? No, so far. Toward understanding, yes. And the more I understand—” William’s voice grew warmer as he spoke and his eyes more distant. Anthony recognized it for what it was, the pleasure of speaking of what ﬁlls one’s heart and mind to the exclusion of almost everything else. He felt it in himself often enough.

He listened as closely as he might to something he didn’t really understand, for it was necessary to do so. He would expect William to listen to him.

How clearly he remembered it. He thought at the time he would not, but at the time, of course, he was not aware of what was happening. Thinking back, in the glare of hindsight, he found himself remembering whole sentences, virtually word for word.

“So it seemed to us,” William said, “that the autistic child was not failing to receive the impressions, or even failing to interpret them in quite a sophisticated manner. He was, rather, disapproving them and rejecting them, without any loss of the potentiality of full communication if some impression could be found which he approved of.”

“Ah,” said Anthony, making just enough of a sound to indicate that he was listening.

“Nor can you persuade him out of his autism in any ordinary way, for he disapproves of *you* just as much as he disapproves of the rest of the world. But if you place him in conscious arrest—”

“In what?”

“It is a technique we have in which, in eﬀect, the brain is divorced from the body and can perform its functions without reference to the body. It is a rather sophisticated technique devised in our own laboratory; actually—” He paused.

“By yourself?” asked Anthony gently. “Actually, yes,” said William, reddening slightly, but clearly pleased. “In conscious arrest, we can supply the body with designed fantasies and observe the brain under diﬀerential electroencephalography. We can at once learn more about the autistic individual; what kind of sense impressions he most wants; and we learn more about the brain generally.”

“Ah,” said Anthony, and this time it was a real ah. “And all this you have learned about brains— can you not adapt it to the workings of a computer?”

“No,” said William. “Not a chance. I told that to Dmitri. I know nothing about computers and not enough about brains.”

“If I teach you about computers and tell you in detail what we need, what then?”

“It won’t do. It—”

“Brother,” Anthony said, and he tried to make it an impressive word. “You owe me something. Please make an honest attempt to give our problem some thought. Whatever you know about the brain—please adapt it to our computers.”

William shifted uneasily, and said, “I understand your position. I will try. I will honestly try.”

6.

William *had* tried, and as Anthony had predicted, the two had been left to work together. At ﬁrst they encountered others now and then and William had tried to use the shock value of the announcement that they were brothers since there was no use in denial. Eventually that stopped, however, and there came to be a purposeful non- interference. When William approached Anthony, or Anthony approached William, anyone else who might be present faded silently into the walls.

They even grew used to each other after a fashion and sometimes spoke to each other almost as though there were no resemblance between them at all and no childish memories in common.

Anthony made the computer requirements plain in reasonably non- technical language and William, after long thought, explained how it seemed to him a computer might do the work, more or less, of a brain.

Anthony said, “Would that be possible?”

“I don’t know,” said William. “I am not eager to try. It may not work. But it may.”

“We’ d have to talk to Dmitri Large.”

“Let’s talk it over ourselves ﬁrst and see what we’ve got. We can go to him with as reasonable a proposition as we can put together. Or else, not go to him.”

Anthony hesitated, “We *both* go to him?” William said delicately, “You be my spokesman. There is no reason that we need be seen together.”

“Thank you, William. If anything comes of this, you will get full credit from me.”

William said, “I have no worries about that. If there is anything to this, I will be the only one who can make it work, I suppose.”

They thrashed it out through four or ﬁve meetings and if Anthony hadn’t been kin and if there hadn’t been that sticky, emotional situation between them, William would have been uncomplicatedly proud of the younger-brother—for his quick understanding of an alien ﬁeld.

There were then long conferences with Dmitri Large. There were, in fact, conferences with everyone. Anthony saw them through endless days, and then they came to see William separately. And eventually, through an agonizing pregnancy, what came to be called the Mercury Computer was authorized.

William then returned to New York with some relief. He did not plan to stay in New York (would he have thought that possible two months earlier?) but there was much to do at the Homological Institute.

More conferences were necessary, of course, to explain to his own laboratory group what was happening and why he had to take leave and how they were to continue their own projects without him. Then there was a much more elaborate arrival at Dallas with the essential equipment and with two young aides for what would have to be an open-ended stay.

Nor did William even look back, ﬁguratively speaking. His own laboratory and its needs faded from his thoughts. He was now thoroughly committed to his new task.

7.

It was the worst period for Anthony. The relief during William’s absence had not penetrated deep and there began the nervous agony of wondering whether perhaps, hope against hope, he might not return. Might he not choose to send a deputy, someone else, anyone else? Anyone with a diﬀerent face so that Anthony need not feel the half of a two-backed four-legged monster?

But it *was* William. Anthony had watched the freight plane come silently through the air, had watched it unload from a distance. But even from that distance he eventually saw William.

That was that. Anthony left. He went to see Dmitri that afternoon. “It’s not necessary, Dmitri, for me to stay, surely. We’ve worked out the details and someone else can take over.”

“No, no,” said Dmitri. “The idea was yours in the ﬁrst place. You must see it through. There is no point in needlessly dividing the credit.”

Anthony thought: No one else will take the risk. There’s still the chance of ﬁasco. I might have known.

He *had* known, but he said stolidly, “You understand I cannot work with William.”

“But why not?” Dmitri pretended surprise. “You have been doing so well together.”

“I have been straining my guts over it, Dmitri, and they won’t take any more. Don’t you suppose I know how it looks?”

“My good fellow! You make too much of it. Sure the men stare. They are human, after all. But they’ll get used to it. *I’m* used to it.”

You are not, you fat liar, Anthony thought. He said, *“I’m not* used to it.”

“You’re not looking at it properly. Your parents were peculiar—but after all, what they did wasn’t illegal, only peculiar, *only* peculiar. It’s not your fault, or William’s. Neither of you is to blame.”

“We carry the mark,” said Anthony, making a quick curving gesture of his hand to his face.

“It’s not the mark you think. I see diﬀerences. You are distinctly younger in appearance. Your hair is wavier. It’s only at ﬁrst glance that there is a similarity. Come, Anthony, there will be all the time you want, all the help you need, all the equipment you can use. I’m sure it will work marvelously. Think of the satisfaction—”

Anthony weakened, of course, and agreed at least to help William set up the equipment. William; too, seemed sure it would work marvelously. Not as frenetically as Dmitri did, but with a kind of calmness.

“It’s only a matter of the proper connections,” he said, “though I must admit that that’s quite a huge ‘only.’ Your end of it will be to arrange sensory impressions on an independent screen so that we can exert—well, I can’t say manual control, can I?—so that we can exert intellectual control to override, if necessary.”

“That can be done,” said Anthony. “Then let’s get going.Look, I’ll need a week at least to arrange the connections and make sure of the instructions—”

“Programming, “ said Anthony. “Well, this is your place, so I’ll use your terminology. My assistants and I will *program* the Mercury Computer, but not in your fashion.”

“I should hope not. We would want a homologist to set up a much more subtle program than anything a mere telemetrist could do.” He did not try to hide the self-hating irony in his words.

William let the tone go and accepted the words. He said, “Well begin simply. We’ll have the robot walk.”

8.

A week later, the robot walked in Arizona, a thousand miles away. He walked stiﬄy, and sometimes he fell down, and sometimes he clanked his ankle against an obstruction, and sometimes he whirled on one foot and went oﬀ in a surprising new direction.

“He’s a baby, learning to walk,” said William. Dmitri came occasionally, to learn of progress. “That’s remarkable,” he would say.

Anthony didn’t think so. Weeks passed, then months. The robot had progressively done more and more, as the Mercury Computer had been placed, progressively, under a more and more complex programming. (William had a tendency to refer to the Mercury Computer as a brain, but Anthony wouldn’t allow it.) And all that happened wasn’t good enough.

“It’s not good enough, William,” he said ﬁnally. He had not slept the night before.

“Isn’t that strange?” said William coolly. “I was going to say that I thought we had it about beaten.”

Anthony held himself together with diﬃculty. The strain of working with William and of watching the robot fumble was more than he could bear. “I’m going to resign, William. The whole job. I’m sorry.It’s not you.”

“But it *is* I, Anthony.”

“It isn’t *all* you, William. It’s failure. We won’t make it. You see how clumsily the robot handles himself, even though he’s on Earth, only a thousand miles away, with the signal round trip only a tiny fraction of a second in time. On Mercury, there will be minutes of delay, minutes for which the Mercury Computer will have to allow. It’s madness to think it will work.”

William said, “Don’t resign, Anthony. You can’t resign now. I suggest we have the robot sent to Mercury. I’m convinced he’s ready.”

Anthony laughed loudly and insultingly. “You’re crazy, William.”

“I’m not. You seem to think it will be harder on Mercury, but it won’t be. It’s harder on Earth. This robot is designed for one-third Earth- normal gravity, and he’s working in Arizona at full gravity. He’s designed for 400° C, and he’s got 300° C. He’s designed for vacuum and he’s working in an atmospheric soup.”

“That robot can take the diﬀerence.”

“The metal structure can, I suppose, but what about the Computer right here? It doesn’t work well with a robot that isn’t in the environment he’s designed for.Look, Anthony, if you want a computer that is as complex as a brain, you have to allow for idiosyncrasies.Come, let’s make a deal. If you will push, with me, to

have the robot sent to Mercury, that will take six months, and I will take a sabbatical for that period. You will be rid of me.”

“Who’ll take care of the Mercury Computer?”

“By now you understand how it works, and I’ll have my two men here to help you.”

Anthony shook his head deﬁantly. “I can’t take the responsibility for the Computer, and I won’t take the responsibility for suggesting that the robot be sent to Mercury. It won’t work.”

“I’m *sure* it will.”

“You can’t be sure. And the responsibility is mine. I’m the one who’ll bear the blame. It will be nothing to you.”

Anthony later remembered this as a crucial moment. William might have let it go. Anthony would have resigned. All would have been lost.

But William said, “Nothing to me? Look, Dad had this thing about Mom. All right. I’m sorry, too. I’m as sorry as anyone can be, but it’s *done,* and there’s something funny that has resulted. When I speak of Dad, I mean your Dad, too, and there’s lots of pairs of people who can say that: two brothers, two sisters, a brother and sister. And then when I say Mom, I mean *your* Mom, and there are lots of pairs who can say that, too. But I don’t know any other pair, nor have I heard of any other pair, who can share both Dad *and* Mom.”

“I know that,” said Anthony grimly. “Yes, but look at it from my standpoint,” said William hurriedly. “I’m a homologist. I work with gene patterns. Have you ever thought of our gene patterns? We share both parents, which means that our gene patterns are closer together than any other pair on this planet. Our very faces show it.”

“I know that, too.”

“So that if this project were to work, and if you were to gain glory from it, it would be your gene pattern that would have been proven highly useful to mankind—and that would mean very much my gene pattern as well.Don’t you see, Anthony? I share your parents, your

face, your gene pattern, and therefore either your glory or your disgrace. **It** is mine almost as much as yours, and if any credit or blame adheres to me, it is yours almost as much as mine, too. I’ve *got* to be interested in your success. I’ve a motive for that which no one else on Earth has— a purely selﬁsh one, one so selﬁsh you can be sure it’s there. I’m on your side, Anthony, because you’re very nearly me!”

They looked at each other for a long time, and for the ﬁrst time, Anthony did so without noticing the face he shared.

William said, “So let us ask that the robot be sent to Mercury.”

And Anthony gave in. And after Dmitri had approved the request — he had been waiting to, after all— Anthony spent much of the day in deep thought.

Then he sought out William and said, “Listen!”

There was a long pause which William did not break. Anthony said again, “Listen!” William waited patiently.

Anthony said, “There’s really no need for you to leave. I’m sure you wouldn’t like to have the Mercury Computer tended by anyone but yourself.”

William said, “You mean *you* intend to leave?” Anthony said, “No, I’ll stay, too.”

William said, “We needn’t see much of each other.”

All of this had been, for Anthony, like speaking with a pair of hands clenched about his windpipe. The pressure seemed to tighten now, but he managed the hardest statement of all.

“We don’t have to avoid each other. We don’t have to.”

William smiled rather uncertainly. Anthony didn’t smile at all; he left quickly.

9.

William looked up from his book. It was at least a month since he had ceased being vaguely surprised at having Anthony enter.

He said, “ Anything wrong?”

“Who can say? They’re coming in for the soft landing. Is the Mercury Computer in action?”

William knew Anthony knew the Computer status perfectly, but he said, “By tomorrow morning, Anthony.”

“ And there are no problems?”

“None at all.”

“Then we have to wait for the soft landing.”

“Yes.”

Anthony said, “Something will go wrong.”

“Rocketry is surely an old hand at this. Nothing will go wrong.”

“So much work wasted.”

“It’s not wasted yet. It won’t be.”

Anthony said, “Maybe you’re right.” Hands deep in his pockets, he drifted away, stopping at the door just before touching contact. “Thanks!”

“For what, Anthony?”

“For being— comforting.”

William smiled wryly and was relieved his emotions didn’t show.

10.

Virtually the entire body of personnel of the Mercury Project was on hand for the crucial moment. Anthony, who had no tasks to perform, remained well to the rear, his eyes on the monitors. The robot had been activated and there were visual messages being returned.

At least they came out as the equivalent of visual—and they showed as yet nothing but a dim glow of light which was, presumably, Mercury’s surface.

Shadows ﬂitted across the screen, probably irregularities on that surface. Anthony couldn’t tell by eye alone, but those at the controls, who were analyzing the data by methods more subtle than could be disposed of by unaided eye, seemed calm. None of the little red lights that might have betokened emergency were lighting. Anthony was watching the key observers rather than the screen.

He should be down with William and the others at the Computer. It was going to be thrown in only when the soft landing was made. He *should* be. He *couldn’t* be.

The shadows ﬂitted across the screen more rapidly. The robot was descending— too quickly? Surely, too quickly!

There was a last blur and a steadiness, a shift of focus in which the blur grew darker, then fainter. A sound was heard and there were perceptible seconds before Anthony realized what it was the sound was saying—”Soft landing achieved! Soft landing achieved!”

Then a murmur arose and became an excited hum of self- congratulation until one more change took place on the screen and the sound of human words and laughter was stopped as though there had been a smash collision against a wall of silence.

For the screen changed; changed and grew sharp. In the brilliant, brilliant sunlight, blazing through the carefully ﬁltered screen, they could now see a boulder clear, burning white on one side, ink-on-ink on the other. It shifted right, then back to left, as though a pair of eyes were looking left, then right. A metal hand appeared on the screen as though the eyes were looking at part of itself.

It was Anthony’s voice that cried out at last, “The Computer’s been thrown in.”

He heard the words as though someone else had shouted them and he raced out and down the stairs and through a Corridor, leaving the babble of voices to rise behind him.

“William,” he cried as he burst into the Computer room, “it’s *perfect,* it’s—”

But William’s hand was upraised. “Shh. Please. I don’t want any violent sensations entering except those from the robot.”

“You mean we can be heard?” whispered Anthony.

“Maybe not, but I don’t know.” There was another screen, a smaller one, in the room with the Mercury Computer. The scene on it was diﬀerent, and changing; the robot was moving.

William said, “The robot is feeling its way. Those steps have got to be clumsy. There’s a seven-minute delay between stimulus and response and that has to be allowed for.”

“But already he’s walking more surely than he ever did in Arizona. Don’t you think so, William? Don’t you think so?” Anthony was gripping William’s shoulder, shaking it, eyes never leaving the screen.

William said, “I’m sure of it, Anthony.”

The Sun burned down in a warm contrasting world of white and black, of white Sun against black sky and white rolling ground mottled with black shadow. The bright sweet smell of the Sun on every exposed square centimeter of metal contrasting with the creeping death-of-aroma on the other side.

He lifted his hand and stared at it, counting the ﬁngers. Hot-hot-hot— turning, putting each ﬁnger, one by one, into the shadow of the others and the hot slowly dying in a change in tactility that made him feel the clean, comfortable vacuum.

Yet not entirely vacuum. He straightened and lifted both arms over his head, stretching them out, and the sensitive spots on either wrist felt the vapors— the thin, faint touch of tin and lead rolling through the cloy of mercury.

The thicker taste rose from his feet; the silicates of each variety, marked by the clear separate-and-together touch and tang of each metal ion. He moved one foot slowly through the crunchy, caked dust, and felt the changes like a soft, not quite random symphony.

And over all the Sun. He looked up at it, large and fat and bright and hot, and heard its joy. He watched the slow rise of prominences around its rim and listened to the crackling sound of each; and to the other happy noises over the broad face. When he dimmed the background light, the red of the rising wisps of hydrogen showed in bursts of mellow contralto, and the deep bass of the spots amid the muted whistling of the wispy, moving faculae, and the occasional thin keening of a ﬂare, the ping-pong ticking of gamma rays and cosmic particles, and over all in every direction the soft, fainting, and ever- renewed sigh of the Sun’s substance rising and retreating forever in a cosmic wind which reached out and bathed him in glory.

He jumped, and rose slowly in the air with a freedom he had never felt, and jumped again when he landed, and ran, and jumped, and ran again, with a body that responded perfectly to this glorious world, this paradise in which he found himself.

A stranger so long and so lost— in paradise at last. William said, “It’s all right.”

“But what’s he doing?” cried out Anthony.

“It’s *all right.* The programming is working. He has tested his senses. He has been making the various visual observations. He has dimmed the Sun and studied it. He has tested for atmosphere and for the chemical nature of the soil. It all works.”

“But why is he running?”

“I rather think that’s his own idea, Anthony. If you want to program a computer as complicated as a brain, you’ve got to expect it to have ideas of its own.”

“Running? Jumping?” Anthony turned an anxious face to William. “He’ll hurt himself. You can handle the Computer. Override. Make him stop.”

And William said sharply, “No. I won’t. I’ll take the chance of his hurting himself. Don’t you understand? He’s *happy.* He was on Earth, a world he was never equipped to handle. Now he’s on Mercury with a body perfectly adapted to its environment, as perfectly adapted as a hundred specialized scientists could make it be. It’s paradise for him; let him enjoy it.”

“Enjoy? He’s a robot.”

“I’m not talking about the robot. I’m talking about the brain—the *brain—*that’s living *here.*”

The Mercury Computer, enclosed in glass, carefully and delicately wired, its integrity most subtly preserved, breathed and lived.

“It’s Randall who’s in paradise,” said William. “He’s found the world for whose sake he autistically ﬂed this one. He has a world his new body ﬁts perfectly in exchange for the world his old body did not ﬁt at all.”

Anthony watched the screen in wonder. “He seems to be quieting.”

“Of course,” said William, “and he’ll do his job all the better for his joy.”

Anthony smiled and said, “We’ve done it, then, you and I? Shall we join the rest and let them fawn on us, William?”

William said, “Together?”

And Anthony linked arms. “Together, brother!”