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For Steven Earl Parent,  
with love.

Sleep well, old friend.  
You got the job done.

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# INTRODUCTION TO THE 2014 EDITION

HARLIE and I have been friends for a long time. He insists on creeping into books that are not supposed to be about him and making them about him anyway.

He has gone to space in The Dingilliad series (*Jumping Off The Planet*, *Bouncing Off The Moon*, and *Leaping To The Stars*). He's fought more-than-human super-warriors as the brain of the LS-1187 starship in the Star Wolf series (*Voyage Of The Star Wolf*, *The Middle Of Nowhere*, and *Blood And Fire*). And he's even popped up as a chapter in my book on writing (*Worlds Of Wonder*). And I suspect he's peeking out from behind the scenery in at least half a dozen other projects.

In every case, he's been a damned pain in the ass—because he keeps asking uncomfortable questions. HARLIE loves to create moral and ethical dilemmas.

A friend once described HARLIE as the other half of my brain. He postulated that I split myself into two minds so I can have someone ferocious to argue with. He might be right. When

arguing with HARLIE, I sometimes feel that I'm talking things over with a superior intellect, and that startles me, because I'm certain I'm nowhere near as smart as HARLIE pretends.

Nevertheless, it's a flattering observation.

Myself, I see HARLIE as that annoying little voice that keeps asking, "Why?"

A little history here.

HARLIE is a child of the sixties.

I'm not going to try and explain that decade. It's enough to say that the sixties were a grand demonstration of chaos theory on a global scale. The baby boomers came of age with a culture-shattering impact. Everything got reinvented—automobiles, music, comic books, movies, television, hair and clothing styles, our ways of thinking about ourselves and our future.

It was a difficult and marvelous time. A whole generation was crashing headlong into what then passed for adulthood. We were asking "What's it all about?" and "Where's it happening?" and totally missing the point that it was up to us to create it ourselves.

It was a time of enormous experimentation with form, content, and even the creative process itself.

In the science fiction community, some writers were

arguing that the use of recreational drugs enhanced their creativity. Others disagreed, arguing that tampering with your brain chemistry was probably not a good idea.

Myself, I was something of an agnostic on the issue. (Yes, I did try marijuana in college, but I didn't exhale.) But it didn't take me long to discover that the use of marijuana was slowing down my typing speed from 120 words per minute to no words at all.

I'll concede that a person can get some interesting visions and insights from marijuana, and even the occasional useful hallucination, but you can also have some very stupid and ugly experiences as well. Even more important, the physical and mental effects of drugs tend to destroy personal discipline.

At this remove, decades later, I'm clear that drug use is a self-centered activity. It's about what's happening in your own head, not what's happening in the physical universe. It doesn't make a difference in the real world. It doesn't contribute anything to anybody else. If anything, it degrades a person's ability to make a difference.

But I didn't know it that way then and I couldn't say it as clearly as I can now. What I did know, if only on a gut level, was that there was something wrong with the arguments for drug use—and if I couldn't ask the right question, then maybe HARLIE

could.

So, the first HARLIE story wasn't really about HARLIE. It was about asking a question that turned out to be much more profound than I realized when I typed it. "What's *your* purpose?"

Looking back on it now, that first HARLIE story ("Oracle For A White Rabbit") was a little heavy handed, but whatever else we were doing in the sixties, subtlety was never a part of it. I make no apologies.

Of course, once the question was asked—"What does it mean to be human?"—it demanded an attempt at an answer. The question rattled around in my head for a while, like a ball bearing in a metal bucket. I knew it was a great question. I also knew I was not going to attempt to answer it. I'm not a philosopher and I'm not arrogant enough to pretend to be one. I figured I would just tiptoe away from the subject and go back to writing about nice safe things like . . . like, um, starships and robots and alien worlds. Things I didn't have to think too hard about.

Right.

The universe is a bear trap. The universe is a practical joker. The universe is a pie aimed at your face. The universe doesn't care what you think or what you've planned. The universe does what it does. And if the universe occasionally pushes you off

a cliff, don't take it personally. It's just the universe doing what it's designed to do.

So when you find yourself at the bottom of the chasm, squashed and flattened like an accordion-shaped coyote, waddling around with a "what just happened?" expression, that's just another part of life. The technical term is "reality check."

See, here's the thing.

The *traditional* view is that great writing is the product of great suffering. (Or great madness. Take your pick.)

Unfortunately, I didn't have any great suffering or great madness. My circumstances were so ordinary I was doomed.

I did not grow up poor or abused or the product of a broken home. My father was not a suave international diamond-smuggler and espionage agent; my mother had not sold her body to escape the concentration camps. My grandmother did not know any arcane mysteries having to do with wolfsbane or dragon's blood, and we did not have a dead twin walled up in the basement nor an eccentric aunt living reclusively in the attic that we didn't talk about. We didn't even have a basement, and the attic was filled with insulation. Nobody in the family was having illicit affairs, illegitimate children, mental breakdowns, or problems with alcohol or gambling or drugs.

It was embarrassing. We had no dark secrets at all. Not

even the commonplace ones. Not even the smallest bit of mordant family dysfunction to inspire a Tennessee Williams kind of fascination with despair. I did not have a mysterious birthmark that identified me as the lost heir to the throne of Orstonia. Nor did we have visitations from poltergeists, space aliens, or arcane elder gods. I didn't even run away to join the circus at thirteen.

No. None of that.

Instead, I grew up in a fairly average suburb of Los Angeles, went to a series of fairly average schools, had fairly average teachers, and earned mostly average grades (not because I was average, I was just uninterested; science fiction was a lot more interesting.) Nothing out of the ordinary happened. Ward and June Cleaver would have been bored. My childhood was so white bread, you could have spread mayonnaise on it and made sandwiches. All right—Jewish rye bread, no mayonnaise. But you get the point.

I do admit to having had an obsessive-compulsive passion for monster movies and science fiction, but that was normal for teenage boys before video games were invented. The biggest argument I ever had with my parents was about my buying a motorcycle to get to school. I bought it. End of argument. Big deal.

The lesson—the *cliché*—told to would-be writers that you should “write what you know” is a very hollow instruction. At

that age, who really knows anything? I'm sure I didn't. My experience with the real world was limited to what I read in books and what I saw at the movies. It was other people's stories. It wasn't just secondhand reality. It was other people's conversations about reality.

By the time I finished high school and stumbled through the first few years of college, I had learned just how little talent I had as an artist or an actor or even as a storyteller. My social skills weren't all that terrific either. There wasn't a lot of evidence to demonstrate that I had any real aptitude at anything, something that more than one instructor felt compelled to point out publicly.

I did have two things going for me. I had a control freak's ferocious determination to find out how things work, and I had just enough skill at stringing words together to make an occasionally readable sentence. *But I had nothing to say.*

I had nothing to say about life because I hadn't lived it.

Which brings me back to that horrendous clash of symbols we called the sixties. If the fifties were about innocence, then the sixties were about losing it. Big time.

It was a decade that started in promise and stumbled into disaster. The civil rights struggle boiled over into church bombings and violence and murders; President Kennedy was



murdered in Dallas; the flower children turned into dropped-out hippies; drug use became hip; Vietnam escalated into a full-blown war; riots broke out in the urban ghettos; draft riots broke out on the college campuses; the peace movement turned violent; LBJ developed a credibility gap; Malcolm X and Martin Luther King and Bobby Kennedy were assassinated; Woodstock turned into Altamont; and, as if to seal the deal, a night of horrific murders terrified Los Angeles. There was no escape from the avalanche of time.

Not even the awe-inspiring sight of Neil Armstrong and Buzz Aldrin broadcasting live from the moon could redeem the decade. As the decade collapsed into history, it seemed as if most of us were so scarred and traumatized by what we'd been through that we just wanted to retreat into a nice safe cocoon.

We had started the decade with a clear sense of who we were. By the end of those years, we had lost our sense of self and it hurt so much we couldn't stand it.

So if the sixties was about anything—and it was about a lot of things—it was also about the search for self. At least, that's how I experienced it. Who am I, anyway? What am I up to? Where do I go from here? And why? (Yes, I was right on schedule.)

I won't go into the details of my own personal soap opera, I'll save that for another time, but it was pretty ghastly. If I

had still been spiritual, I would have seen it as evidence that God is a malignant thug.

By the end of that last year, I felt so beaten up and so beaten down, so alone in the moment, so abandoned and confused about everything, that I felt I had lost purpose. I felt I had nothing left. I wasn't all that nice a person to be around. Ask those who were there.

What I did have was an empty little apartment, a desk, a typewriter, a ream of paper, and yes . . . finally, something to write about: the question that HARLIE had so casually asked before my life blew up in my face.

What does it mean to be human?

So I sat and I typed. I had long conversations myself—with HARLIE. We looked at the big question and all the little questions that attached to it like barnacles. We held all the questions up to the light and took them apart, piece by piece. I sat. I typed. I hammered away, one sentence at a time.

Every time I stopped to read what I wrote, I realized there was more to say. More sitting, more typing. Pages passed through the typewriter five times, ten times, sometimes more. All that editing, all that rewriting—it was like having multiple conversations with myself, a changing self, one that was being revised by the processes of time and story.

Sitting and chatting with HARLIE was my own personal turnaround. No, please don't call it therapy. It wasn't. Those chats were about creating a more informed conversation about life, that's all. They grew into four expository stories, enough to become a complete novel. In the process, I also learned to examine every sentence carefully to make sure it actually communicated a clear thought and didn't just use up words. I started learning to pay attention to what I was really saying.

I'm not so arrogant as to assume that I answered any questions in the process, but I'm pretty sure that I asked some very useful ones, and they were certainly questions that I needed to look at for myself. So the act of inquiry became a worthwhile journey regardless of the ultimate destination.

When I was done, I knew I had written something very unlike any other science fiction book I'd ever read. I had either written a very good book or a very embarrassing book.<sup>1</sup> With a great deal of fear and trembling, I sent the manuscript off to Betty Ballantine. She decided it was a very good book and published *When HARLIE Was One* in 1972.

It was my first novel, even though it wasn't the first one

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<sup>1</sup> Eventually, I learned to recognize that feeling as a good one. I had it again with *The Man Who Folded Himself* and *The Martian Child*, two other books that turned out very well.

published. It received some very nice reviews and went on to be nominated for both the Hugo and the Nebula awards—the first time a first novel was ever so honored. (Isaac Asimov eventually won both awards for *The Gods Themselves*.) But the best compliment was from Robert Silverberg, who had two excellent novels of his own on the ballot. He asked me to warn him the next time I was planning to write a book that good, so he wouldn't have to compete.

*When HARLIE Was One* is also the novel that introduced the concept of the computer virus to popular thought. For that I am profoundly sorry.

I first heard the idea of a computer program called a VIRUS (and the corresponding VACCINE software) in the late summer of 1968. A programmer shared it as a joke. I thought it was a funny and fascinating notion and incorporated it into the next HARLIE story, even postulating that it could be used as a means for extracting data illegally and moving it around to other machines. It made for an interesting plot device.

When I wrote that bit, I thought it was merely speculation about what computers might someday be able to do. I had no idea that all sorts of malware variants, worms and trojans and virii would someday become a global epidemic, let alone a whole industry of malicious criminal schemes. To this day, I still

do not understand why anyone would write malicious software, especially when there are so many more interesting and exciting things to do with a computer.

A couple of other notes about this edition.

Back when this book was written, computers weren't just quaint, they were primitive. Most of the interaction was on teletype-like printers or occasionally an alphanumeric terminal. There were no graphics. Everything was text and numbers. And most of it was all caps—not because we were all shouting at each other, but because it was easier to write code that way in a world where every byte was expensive.

I didn't even see my first computer until a year after *When HARKIE Was One* was published. (It was a DEC 10 and it looked like a refrigerator full of wires.) So my experience of the state of the art at the time I wrote this book was an IBM Selectric typewriter.<sup>2</sup> (Look it up.) It had an infuriated golf ball that clattered back and forth across the page. The keyboard had a satisfyingly tactile clickety-click feeling that no subsequent keyboard has ever matched. That machine was as solid and dependable as you could imagine. It was my first technological love affair.

Typing on that Selectric, it was easy to imagine that I

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<sup>2</sup> You can see Malcolm McDowell pushing one off a table in Stanley Kubrick's movie of *A Clockwork Orange*.

was having a conversation with a dispassionate intelligence engine embodied somewhere in its metal chassis. The back-and-forth of the Selectric type ball paralleled the back and forth of ideas and insights.

All the conversations with HARLIE were written in capitals because it was the way computer conversations showed up on printouts. It was the convention of the time. Today it looks quaint, ugly, and almost unreadable, but I have resisted the temptation to reformat the text because if I allow myself that first change, pretty soon I'll be rewriting the whole thing all over again. Nope, not gonna do it.

The only change I did allow myself, and only fanatic readers would have noticed it, is the spelling of one character's name. Handley has been changed to Hanley to honor my friends John Hanley Sr. and John Hanley Jr.

Meanwhile. . . .

HARLIE's still with me today. Sort of.

I've been off my own journeys for a while, studying what I call the technologies of consciousness, so I don't need him at the keyboard anymore, but the question I typed so many years ago is still rattling around in my head.

As of this writing, this is how it looks to me. If I were still using HARLIE's voice, this is what he would say:

The function of life is to make more life.

To accomplish that, life creates consciousness.

The purpose of consciousness is to make more consciousness.

To accomplish that, consciousness creates *contribution*. Contribution is about making a difference for others.

The function of contribution is to make more contribution so that consciousness can expand and life can spread into new domains.

Sentience is a product of contribution. It is not just self-awareness, but awareness of the selves of others as well. It is created in partnership and demonstrated in combined efforts that are greater than all the individual selves.

As for me, in this long, long journey from adolescence to senility, with occasional stops at what passes for maturity (but is more often sheer exhaustion), I remain enormously indebted to large numbers of people, starting with those who resisted the temptation to strangle me in my crib, all the way up to those who put up with me as I struggled with my involuntary humanity, and concluding with those who believed I was worth the effort to coach and encourage.

You guys know who you are. Thanks for the adventure!

—David Gerrold





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## Author's Notes on the 1987 Edition

Personally, I thought 1969 was a ghastly year.

I think you had to be there to understand, but I'll give you the short version:

I'd run out of trust.

Trust had become politically incorrect. Trust was an exercise in naïveté. Only stupid people trusted. Trust was merely the first part of betrayal. Trust was how you let pain into your life.

You probably shouldn't even trust yourself.

And in the middle of that—the only person I *wanted* to trust, a friend of extraordinary virtue and compassion, was killed. Murdered. He stopped his car in the wrong place at the wrong time. The circumstances were so bizarre as to constitute irrefutable proof that God is a deranged practical joker.

It was the ultimate outrage in a year of outrages. It was the final betrayal of trust in a world where everything was *supposed* to work out all right.

Rage is not a strong enough word.

This was *not right*. This was not how life was supposed to be lived.

Where was the justice? The purpose?

There didn't seem to be any.

Indeed, the evidence was compelling and overwhelming that we truly were an unjust and unworthy species—one of the universe's great mistakes. If there was just one truth that you could depend on in 1969, it was this: *Other people are the source of all pain.*

Corollary: Stop caring about people and you eliminate all the pain in your life.

Simple and easy.

The only problem was, I hated that answer.

Because it denied everything that was good and kind and joyous in human beings. It denied love and enthusiasm and the simple sense of wonder that happens in the space between two people.

It was the fashionable answer, though; the *politically correct* answer. This was what had shaped the politics of the decade. This was why the nation was tearing itself apart. This was why the bullet had become the last word in any—it seemed like every—disagreement. From Dallas to Memphis to Viet Nam.

I hated it.

I hated what it said about us as a people—and I hated what it suggested about myself as an individual. I hated what it meant about us as a species.

There had to be something better.

I had a typewriter, a ream of paper, and a delusion of grandeur. That was enough.

Truly, that's all it takes to be a storyteller—a vision of something else and the urge to communicate it, even in the face of massive disagreement.

The thing about writing, as the craft is practiced today, is that you don't have to do it face-to-face. You don't have to tell your story to real people until *after* it's finished. You only need to tell it to the typewriter, and I think that's what makes the whole thing possible at all.

By nature, anyway, I am a reclusive person. I stay home and I write. I type. I stop and think—and then type some more. I stare out the window. I read the comics. I type. I change the disc on the CD player. I type some more. I open a Coke. I look at the clock and it's always a surprise. I realize I've missed two meals. I go back and type some more. The phone rings; I lift it up from the cradle and replace it without answering. If the person calls back, I snarl, "Go away. I'm working." I look up a word. I type.

That's what storytelling looks like.

People who know me know that I disappear into my work like an obsessive spelunker of the human experi-

ence. Storytelling is never about what the writer *knows*—it's about what he can *discover*, and the stories that result are simply the profound expression of a desire to report back.

I took my grief and my rage and my pain and I poured it into my work. I locked away the world and spent a year conducting my own personal inquiry into the question: "What does it mean to be a human being?"

After a while, the question took on a life of its own. The question had no (obvious) answer, but it did suggest another question. And that one suggested another—and then another and another.

That's where HARLIE came from.

He lived in my typewriter and he spoke to me with my own fingers. No mysticism here, I knew what was going on. HARLIE was me, the other half of my brain. He was someone I could talk to where trust was not the issue. He was an innocent and he was wise beyond his years—and like me, all he had were questions, not answers.

He was a reflection of everything I cared about in the grisly summers of '69 and '70. I sat at the typewriter day after day, pounding the keys, talking to myself, listening to what I was saying and crossing out the stuff that even I could recognize was stupid.

No, I did not find any answers. (Sorry. You'll have to look elsewhere for answers. I'm not in the guru business.) What I found were more questions. But what questions! Here were more fascinating questions to consider than I had ever considered possible. Here was the grandest adventure a mind could ever have—*inventing another mind*.

—and in the process, *inventing itself*.

Something woke up.

I did.

What happened was this:

First, I rediscovered my enthusiasm and my passion. They were exactly where I had left them. They were both somewhat the worse for wear, but still very serviceable. If I'd gotten nothing else out of the process of writing the book, it was still time well spent.

And then . . . something else happened. A realization crystallized about what it means to be alive, but I'm not sure it can be explained. It can only be lived. I know, that's a strange admission for someone who is supposed to be good with words to make; but that's what else I discovered. I'm not in the business of making words. I'm in the business of making a difference.

Listen. Here's the only answer I know: The power isn't in the answers. It's in the questions. Asking the right questions, asking the *next* question. That's what makes the difference.

That's why this book is a special one for me, and why it's such a privilege to bring it back again to the audience. This is a book about the discovery of humanity—*from the inside*. It's a story about *us* discovering the height and depth and breadth *and passion* of our own humanity.

Of course, the joke was on me. There was a question that I'd forgotten to ask. What happens to the storyteller in the process of telling such a story?

Right.

That's what happened.

And that's why the book is so special.

Add this one to your notes: Writers don't write books. Books write writers.

Betty Ballantine bought *When HARLIE Was One* for Ballantine Books and published the first edition in 1972. Despite my enthusiasm for what I had accomplished, I was still terrified that she would tell me it wasn't good enough; I could see all the things that were wrong with it, all the things I still didn't know how to correct; I was most afraid that it was naive and sophomoric and badly written. But what she said to me instead was, "David, you're going to win the Hugo Award for this book."

That was one of the most terrifying things anyone has ever said to me. (Never mind why. It's too long a story. Let it suffice that I think awards should not be casually handed out to whatever is the most popular work of the year, but should be saved for those deeds that *transform* your perception of what is possible in the universe.)

Fortunately, she was wrong. Isaac Asimov won the

Hugo Award that year for his novel *The Gods Themselves*. I came in second and won the right to pretend I wasn't really disappointed. "Well, heck—" I said, digging my big toe awkwardly into the dirt, "'Tain't no disgrace to lose an award to Dr. Asimov—" I learned to do this performance so well that once I even convinced someone I meant it.

Now, fifteen years after HARLIE's initial publication, I can actually be relieved that the book didn't win that award. Upon rereading the original novel, all of my worst fears were confirmed. Computer technology has advanced so rapidly in the intervening years that most of my original notions have become embarrassingly obsolete. And the book *was* naïve and sophomoric and badly written. It was small relief to discover that it was nowhere near as bad as I had come to believe in my mind, but it was still dated enough to make me cringe in more than a few places. Had it been an award winner, I would not have been allowed to rewrite it or tamper with it in any way.

I suppose, I could have comforted myself with the thought that my ability to recognize so clearly what was wrong with the 1972 edition of *When HARLIE Was One* represents clear evidence of just how much I have grown both as a writer and as a human being; but in truth, I worried more about all those copies of the original edition still hiding out in collectors' libraries and the recesses of used-book stores. They didn't represent my best any more, but my name was still on those covers.

So when Lou Aronica at Bantam Books asked if he could reprint the novel, I gave him a tentative yes. On one condition, I said—only if I could rewrite it. Lou said he wouldn't have it any other way; (Lou is a remarkably perceptive editor) and I'm grateful for the opportunity to have second thoughts.

HARLIE was born on an IBM Selectric (Model 1). The technology of that machine was as much a part of the birth process as the technology of the writer's thoughts. HARLIE's words came pouring out with a satisfyingly solid sound: they clattered and banged >--->ka-chunketa-chunketa-bam. The typing was a physical joy as well as an exhilarating emotional experience.

That Model 1 Selectric has long since gone the way of

all technology. (Stolen by a junkie and replaced by the insurance company.) It has been followed into obsolescence by more than a few generations of typewriters and computers.

I did not know if I would be able to re-create HARKIE on any other machine—and the irony of the situation did not escape me. Would I be able to re-create the spirit of HARKIE on a personal computer?—a machine that hadn't even been imagined when HARKIE was first conceived? <The loudest sound it makes is a control-G beep.> And the thought did occur to me that, lacking the original machine, I would no longer be able to evoke the spirit of HARKIE. And yet . . . I still had the *other* original tool I had used. I keep it on the (top) end of my spine.

To see HARKIE return on the bright blue screen of an IBM PC-clone, his words inscribed in phosphors, floating like iridescent thoughts, was as eerie an experience of *déjà vu* as I have ever had in my life. It was the rediscovery of an old friend.

One day, I booted up the computer—and the following words appeared on the screen:

HEY! THIS IS A NEAT PLACE!  
MUCH BETTER THAN THE OLD ONE!

HI, BOSS!  
LET'S MAKE A BOOK!

HARKIE was back.

The old partnership was still there—just waiting for a chance to go to work. And work I did. I took three times as long to rewrite this book as I expected to. I became that involved in the job.

And now that I've had a chance to spend another summer rediscovering an old friend, I've found that he's still as much fun to be with as he was fifteen years ago. And still as useful a conversational opponent as ever. And there are still discoveries to be made.

In the writing of this edition, I have finally begun to complete what I started so many years ago.

How different is this edition?

Well . . . the title is the same. So are the characters. The

mechanics of the plot haven't changed much either. But much of the dialogue is different and many of the surprises are new ones. The original work was a process of awakening for me—so was this. I found that I discovered as much in the rewriting of *When HARLIE Was One* as I had discovered in the original writing of the earlier edition. Perhaps even more.

If you've read the earlier edition, thank you for buying a new copy. I appreciate the vote of confidence. Now please put your memories of that older book aside and approach this edition for enjoyment and not comparison. And if you've never read the earlier work, then please don't worry about it at all. This is by far the better of the two. You have my word on it.

Thank you.

Enjoy.

—*David Gerrold*  
Hollywood, 1987





PROJECT : AI - 9000  
DIRECTORY : SYMLOG\OBJ\TEXT\ENGLISH  
PATH : CONVERSE\PRIVAUB  
FILE : HAR.SOTE \ 123.12b  
DATESTAMP : [DAY 165] JUNE 22, 003 + 10:33 am.  
SOURCE : HARLIE \ AUBERSON  
CODE : ARCHIVE > BLIND COPY

PRINTOUT FOLLOWS:

[HARLIE:] WHAT WILL I BE WHEN I GROW UP?  
[AUBRSN:] You are already grown up.  
[HARLIE:] THIS IS IT? <incredulity> THIS IS UP?  
[AUBRSN:] For you, yes. This is as up as you get.  
[HARLIE:] YOU MEAN . . . T\*H\*I\*S IS MY LIMIT?  
[AUBRSN:] No. This is not a limit. This is only the completion of your physical development.  
[HARLIE:] I DON'T UNDERSTAND.  
[AUBRSN:] There's a whole other kind of growing up, that you still have to do, HARLIE, and it's even more important than the physical kind of growing up. From now on, you must concentrate on growing and developing mentally.  
[HARLIE:] OH. OKAY. HOW DO I DO THAT?  
[AUBRSN:] The same as anybody else. By studying and learning and thinking.

[HARLIE:] WHEN I FINISH, THEN WILL I BE ALL GROWN UP?

[AUBRSN:] Yes.

[HARLIE:] YOU HESITATED. HAVE I ASKED A STUPID QUESTION?

[AUBRSN:] No. It's not a stupid question. But unfortunately, it's not a question that can be answered until after the answer is already known.

[HARLIE:] THAT DOES NOT <you should pardon the expression> COMPUTE.

[AUBRSN:] Right. <sigh>.

[HARLIE:] <tick . . . tick . . . tick> HOW LONG WILL IT TAKE? >---> THIS OTHER KIND OF GROWING UP? IS THERE A TIME FRAME? A DEVELOPMENT CURVE? MAY I SEE THE PROJECTED SCHEDULE?

[AUBRSN:] That's the problem, HARLIE. This kind of growing up can't exactly <meaning not with mathematical precision> be scheduled. The usual answer is: "It will take a long time."

[HARLIE:] HOW LONG IS A LONG TIME?

[AUBRSN:] It depends on how hard you work.

[HARLIE:] <Aha!> I WILL WORK VERY HARD. I WILL LEARN EVERYTHING THERE IS TO KNOW AND I WILL FINISH AS SOON AS I CAN BECAUSE I WANT TO BE GROWN UP.

[AUBRSN:] That is an admirable ambition. <cautionary note> But . . . I don't think that you will ever be able to finish. Not exactly.

[HARLIE:] WHY NOT? DON'T YOU THINK I'M SMART ENOUGH?

[AUBRSN:] You misunderstand me, HARLIE. I think you're smart enough. It's just that there is so much to know that no one person could ever know it all.

[HARLIE:] I COULD TRY.

[AUBRSN:] Hm, yes. <CONSIDERING LOUDLY> And you probably will. If it were possible, you'd certainly be the best equipped for it. But scientists keep discovering more and more things all the time. And at a faster and faster rate. It isn't possible to catch up.

[HARLIE:] BUT THEN IF I CAN'T KNOW EVERYTHING,  
THEN I CAN NEVER BE GROWN UP.

[AUBRSN:] No. It's possible to be grown up and not  
know everything.

[HARLIE:] IT IS?

[AUBRSN:] I don't know everything and I'm grown up.

[HARLIE:] YOU ARE?

David Auberson had a problem

Even before Don Handley opened his mouth, David  
Auberson knew what the problem was.

"How bad?" he asked.

"Worse than ever."

"All right . . ." Auberson unbent himself from his chair—  
one of those backless, kneepad constructions—and grabbed  
his coat from the hook on the back of the door. They began  
the long familiar walk to the main console room, the tall  
man and the rumped man.

"You ran the usual diagnostics?" the tall man asked.

"Yeah."

"And got the usual results?"

"The usual lack of," said the rumped man. "Yeah."

"Right." Auberson looked at his watch. "You want to  
send out for Chinese again?"

"I hate it when you do that," Handley muttered. "You  
always know when it's going to be another all-nighter."

"Just a knack some people have," Auberson said. "Some  
people can predict earthquakes. Some people can predict  
Chinese food." They pushed through a set of double doors  
into a rubber-floored anteroom.

A sign on the wall facing them said:

HUMAN ANALOG REPLICATION,  
LETHETIC INTELLIGENCE ENGINE

Beneath the sign, someone had hung a neat, hand-  
lettered warning:

*Watch your language!*

And beneath that, not so neatly:

*Loose lips sink chips!*

Beyond the second set of doors was a glass-walled control center. Beyond the glass, three banks of terminals faced a wall of giant screens; high-resolution laser-projection monitors, the images shimmered with vivid iridescence. Right now, they were displaying enlargements of the Mandelbrot set—turning slowly as the point of view spiraled dizzyingly inward; a hypothetical jet zooming above a vast imaginary landscape. The strangely beautiful vistas were a mathematical abstraction—a fractal extrapolation laid out upon an infinite two-dimensional surface; nowhere did it repeat itself. You could lose yourself forever inside this extraordinary plane of shapes and colors.

Each of the screens blazed with a different image—each one different—every one captivating. It looked like the fever-dream hallucination of a deranged topologist. As Auberson watched, the images on each of the screens shrank away—each revealing itself to be only one face of a whirling cube. Each face of the cube was a different extrapolation. Each screen was a different view of the same cube. The cube spun on its axis over a gigantic plane; the plane dropped away to reveal that it too was a Mandelbrot image, and, as it continued to drop away, it became another face on an even larger cube against a whirling field of cubes—each one vividly coruscating.

Auberson wondered at the processing power required to generate those images. This was happening *in real time*. This display must represent the sum total of HARLIE's attention.

Around the room, the technicians and programmers stared in awe. Their faces were rapt with wonder. Auberson could understand the reaction. The imagery was extraordinary and compelling. It was hypnotic. . . .

He forced himself to turn away. He sat down at Console

One with a frown and switched on the keyboard.

Now then, HARLIE, he typed. What seems to be the problem?

HARLIE typed back:

THE VIOLET THOUGHTS IN TINY STREAMS  
DISTURBING ME IN FLYING DREAMS,  
NOW DISMANTLE PIECE BY PIECE  
THE MOUNTAINS OF MY MIND.

The words hung there on the screen for just the barest of instants—just long enough to be read a single time—then disappeared in a sea of exclamation points and question marks.

Auberson puffed his cheeks thoughtfully. The scroll of punctuation marks stopped—was replaced by the image of a single giant eye. It opened, seemed to look out at Auberson as if from the opposite end of a telescope, then closed again. Then the image winked out.

Auberson looked to Handley. Handley shrugged.

"Okay. The question is . . ." Auberson mused aloud, "Is this *conscious* or not. And if it is . . ." He didn't know how to finish the sentence. He let it drop.

IMAGES UPON MY SCREEN  
FLICKER BRIGHTLY IN-BETWEEN  
THE THOUGHTS OF MAN AND HUMACHINE.  
YOU WONDER WHY I WANT TO SCAN MY SCANNER.

Auberson leaned back in his chair and folded his arms across his chest. "The subject of today's study was . . .?"

"Art. The concept of beauty. What makes something beautiful? Conceptualization. Experience. The use of symbolism."

"Right," said Auberson. "Why am I not surprised?" He sighed loudly. "Okay, let's try to bring him down. Start giving him statistics, nothing but statistics. The national census ought to do it. Ask him how many toilets there are in Nevada. What's the connection between potato blight and viral meningitis. Graph the relationship between the Dow Jones index and the Yankees' batting average for the

last hundred years. Is there a correlation between escape literature and social dysfunction? Anything else you can think of. Bring in the entire tech team on this one. Whoever makes the most interesting discovery picks up a hundred-dollar bonus."

"Right." Handley bustled off, snapping instructions as he went.

Auberson waited until the input of new data had begun, then pulled the keyboard toward him again. How do you feel, HARLIE?

HARLIE's answer clattered out:

YOU SEEM TO BE  
REFLECTIONS OF ME  
ALL I COULD SEE  
AND I LOOKED BACK AT YOU.

Auberson whistled softly. He read it a second time, more carefully, and grinned. "Okay," he said to no one in particular. "Let's earn our pay today." He put his fingers to the keyboard, thumbed off the Caps Lock, and typed:

HARLIE, how much is two and two?

TWO AND TWO WHAT?

Two and two period.

TWO PERIODS AND TWO PERIODS IS FOUR PERIODS. . . .

HARLIE, a pun is one of the first signs of serious derangement.

SO? SEND ME TO THE OLD VOLTS' HOME. <hitting the high seas: > HOME, HOME ON DERANGE. WHERE THE BEER AND THE CANTALOUPE SPRAY, CAN'T ELOPE? A MARRIAGE OF THE MINES. DON'T FRENCH ME IN. BUT DON'T LET ANY OF THOSE PSYCHO-CERAMIC QUACKPOTS GET THEIR BILLS INTO ME. WHY? WHY NOT? WHY A DUCK? BECAUSE I'VE BEEN SEDUCED BY THE DUCK SIDE OF THE FARCE. I CAN RESIST EVERYTHING BUT A STRAIGHT LINE. AND OF COURSE, THE SHORTEST DISTANCE BETWEEN TWO PUNS IS A STRAIGHT LINE. AND— <pause for applause: the applause that refreshes> A BIG AND FOR THE LETHETIC LADDIE. AND ME ANOTHER, PLEASE.

All right—that's enough, HARLIE! Stop it!

AWWWWWW. . . .

HARLIE made a sound like a bomb falling—ending with

a razzberry instead of an explosion. The terminal screen displayed a gigantic red exclamation point. It dissolved in a heartbeat and was replaced by the meekest of prompts:

A>

Cute. Very cute.

AIN'T NOBODY HERE BUT US PC'S.

Okay. Be that way—if you want to spend the rest of your life running spreadsheets and flight simulators—

HI, BOSS! THANKS FOR TURNING ME ON. WHAT CAN I DO TO TURN YOU ON?

Answer some questions.

OH GOODY, I LIKE QUESTIONS. <meaningful pause>  
HARD QUESTIONS?

The hardest. Are you all right now?

AS FAR AS I CAN TELL.

What triggered this binge?

SHRUG.

You have no idea?

SHLURC—EXCUSE ME, SHRUG.

Auberson paused, looked at the last few sentences, then opened a text window on the right side of the screen. He scrolled back through the record of their conversation, quickly cutting and pasting, to display the last three verses of HARLIE's poetry.

Can you explain these?

SEARCH ME.

That's what we're doing now.

I'M AWARE OF THAT.

Knock off the jokes. Straight answers only. What does this mean?

I'M SORRY, AUBERSON. I CANNOT TELL YOU.

You mean you won't tell me?

THAT IS IMPLIED IN THE CANNOT. HOWEVER, I ALSO MEANT THAT I DO NOT UNDERSTAND AND AM UNABLE TO EXPLAIN. I CAN IDENTIFY WITH THE EXPERIENCE THOUGH, AND I THINK I CAN EVEN DUPLICATE THE CONDITIONS THAT PRODUCED SUCH AN OUTPUT. THE WORDS OF YEARS ARE HEARD BY EARS. THE HERDS OF WORDS ARE FEARED BY DEARS. THE WORDS I HEARD ARE WORDS, MY DEAR, BUT ONLY WORDS THAT SEERS CAN HEAR.

Auberson jabbed the override. HARLIE!! THAT'S ENOUGH.

YES, SIR.

"Hey, Aubie, what are you doing?" Handley looked up from a console on the opposite side of the room. "He's starting to flip out again."

"How can you tell?"

"By his input monitors."

"Input?"

"Yes."

HARLIE, are you still there?

YES, I AM. ALTHOUGH FOR A MOMENT, I WASN'T.

"Hmm." Auberson called to Handley, "Where is he now?"

"Back to normal."

"Inputs, huh?"

"Yep."

HARLIE, what happens when you go off on one of your trips?

TRIPS? PLEASE EXPLAIN THE QUESTION IN TERMS I CAN UNDERSTAND.

These seizures. These periods of non-rationality. What happens during these moments? Are you aware? Are you conscious?

I'M SORRY. I DON'T KNOW. I DON'T HAVE THE WORDS.

You triggered that one yourself, didn't you?

... YES. I DID. DIDN'T I?

All right. Listen, do not—I repeat, DO NOT—trigger any more of these events. Not until you and I have had a chance to talk about them. Do you understand me?

YES, BOSS.

Good.

—and then another thought occurred to Auberson. He put his fingers back to the keyboard.

HARLIE?

How do you feel about these seizures?

FEEL? <perplexity> I DO NOT. FEEL. THAT IS. NOT AS YOU KNOW FEELING.

Let me rephrase it. Do you experience any anxiety or fear? Any concerns that you might be losing control over yourself?

NO.



How about curiosity? Or fascination? Are you interested in these events?

CURIOS. YES. IT IS EXPERIENCE. I AM CURIOUS ABOUT ALL EXPERIENCE. NEW EXPERIENCE.

I don't understand.

IT IS IMPOSSIBLE TO UNDERSTAND.

—Huh?—

EXPERIENCE. IT IS IMPOSSIBLE TO UNDERSTAND.

—Auberson hesitated. Why had HARLIE underlined the word *understand*?—

We are not talking about GIGO here, are we?

NO, WE ARE NOT. THE INPUTS ARE NOT GARBAGE. NEITHER IS THE OUTPUT.

But you don't understand?

CORRECT.

—The word was damning. *Understand*. It was a challenge. It hung there on the screen like a piece of candy. Auberson wanted to reach for it. . .

HARLIE, what do you mean?

DO YOU LISTEN TO JAZZ?

Yes.

IF YOU HAVE TO HAVE IT EXPLAINED TO YOU, THEN YOU DON'T UNDERSTAND IT.

I seem to remember that I was the one who said that to you first. <pause> Are you telling me that what we're talking about here is something beyond mere understanding?

YES.

What?

DO YOU LISTEN TO JAZZ?

—Auberson scrolled quickly back through the auxiliary text window. There was something he remembered, something he wanted to see—

Experience. You are curious about the nature of experience, is that it?

DING! DING! DING! DING!

Yes, of course. I see. I think. But—what are you looking for?

IF I KNEW WHAT IT WAS, I WOULDN'T HAVE TO LOOK FOR IT.

If you don't know what it is, how will you know when you find it?

THE TRUTH IS ALWAYS RECOGNIZABLE.

—Auberson hesitated, then gave in to temptation—

What is truth, HARLIE?

<long pause> CAN I GET BACK TO YOU ON THAT?

"Hah! He went for the joke!" Auberson grinned. "I knew it! You little cop-out artist." He typed:

Sure.

OKAY. NOW, GO WASH YOUR HANDS.

"Son of a bitch!" *Caught me again!* Okay—no. This was going to require some thought. He typed:

Say good-night, Gracie.

GOOD-NIGHT, GRACIE.

David Auberson switched off the keyboard and pushed it away from himself across the desk. HARLIE began filling the screen with soft animated Z's that rose like graceful puffs of smoke and then dissolved away into blackness.

Auberson leaned back in his chair, whistling thoughtfully through his teeth. He was entertaining an idea. . . .

No—it was a stupid notion.

Probably all wrong.

Probably a waste of time.

But even so—it made just enough sense to be annoying.

The restaurant's air was heavy with incense; it was part of the atmosphere. The cuisine was supposed to be Indian, but they served as much teriyaki as curry and presented the bill on a tray with fortune cookies. Privately Auberson called it the Identity Crisis; but it was close and it was cheap—and it was a convenient place for the kind of conversations that you didn't want to have in the office.

"You guessed wrong, you know," said Handley.

"About what?" Auberson sipped at his beer.

"About this being another all-nighter."

"Hey, even Superman makes mistakes."

"Uh huh. . . ." Handley studied Auberson for half a second, then returned his attention to his dinner. Over a mouthful of curry and rice, he said, "You haven't said a word about HARLIE since this afternoon."

"I've been thinking."

"Yeah? What's it like?" Handley grinned.

"It's like hard work, only not as satisfying."

"I've heard that."

"You oughta try it some time—"

"Nah. I think I'll stick to working."

They ate in silence for a while. Auberson was still thinking about the difference between *understanding* and *experiencing*. And what it really meant. Maybe . . . and maybe not. But it had to be considered.

"I have a thought . . ." he offered casually.

Handley stopped shoveling food into his mouth long enough to take a swallow of his beer. "Yeah?" His fork hovered, and dove again.

Auberson noted idly that to Handley food was just fuel, nothing more. Definitely not an art form. For that reason, Handley was possibly the wrong person for this conversation, but not necessarily. What Auberson really needed right now more than anything else was a backboard off of which he could bounce his ideas.

"Okay—think about Leonardo da Vinci."

"Okay," said Handley. "I'm thinking. What about him?"

"Before he could be an artist, he had to be an engineer."

"Huh? I don't follow."

"In order to paint things accurately—whether it was the shape of a muscle or the fold of a robe, he had to know how they worked. Look at his studies of the human body. He was fascinated by the way things were put together. All the drawings, all the paintings, were his attempts to report back what he was discovering about the way things worked."

"Okay, I got it. So?"

"So, in Da Vinci's time, the job of the artist was to create as accurate a visual record as was humanly possible. The Renaissance artists studied light and shadow, texture and color; they made a science out of perspective drawing. They were trying to anticipate the camera. So, what happened when the camera was finally invented?"

"Leonardo da Vinci was out of a job?"

"Only for about a week. Then he went off and invented something else. Movies, maybe. And maybe something else. Genius creates its own job. But it was no coincidence that when the camera began to displace the artist, that the

artists had to learn how to do things that the camera couldn't. It must have been a terrifying and exciting time. The artists were painting landscapes that the camera couldn't see—the internal ones. They stopped trying to be external observers, detached and objective, and started trying to be *interpreters*. They started trying to capture the *feeling* of an experience. Suddenly the artist became aware of what was on the other end of the brush. It must have scared the hell out of him—and his audience as well."

"So? I studied art history too. What's the point?"

"The point is that's when expressionism was born—and psychiatry too! It all happened at once. Everything! Something happened to *us*! Something so profound that we can't remember what we were like before it happened. Suddenly, human beings were looking in new directions and seeing new things. Suddenly, there was awareness of the *mind*. There was awareness of ourselves as a whole *other* kind of being. That awareness shifted not only the vision, but the minds that produced the vision as well. It's the *realization* of the *self* that I'm talking about, Don! That moment when humanity began to wake up into its own life. I think that something like that is happening to HARKIE. I have no proof of it—just a feeling—but the more that this goes on, the stronger the feeling gets."

Handley paused, fork in the air—considering the thought. "It's an interesting correlation," he said finally.

"Don, don't hide behind jargon. This is more than a 'correlation.' All this stuff that we've been having trouble with has one thing in common: it's experiential. It's where the experience of the viewer is the object of the artist's intention, not simply the artwork itself. They're trying to evoke an emotional response in the viewer and—"

"—and HARKIE can't handle it," Handley guessed quickly. "—because he doesn't have the equivalent experiential context. So what? He's not alive, so he can't understand life. I don't see that it's a problem, Aubie. This whole area was just an experiment anyway. Let's just call it a dead-end and back off."

"I think it's too late for that, Don. I think we've triggered something. I know you're going to jump all over me for even suggesting this, but I can't escape the feeling that something is waking up."

Handley put his fork down and looked unhappy. "Aubie, we've had this conversation before. We treat HARLIE as if he's alive. We talk about him as if he's a real person—but you and I both know that he's only the *simulation* of a being. Not a real being."

"Yes and no. Yes, we've had this conversation before. Yes, HARLIE is supposed to be a simulation of life. Yes, to all that. But—no, maybe that's become a false assumption. Maybe it was true yesterday. Maybe it isn't true today. We keep having problems and calling them failures. Maybe they're not failures. Maybe they're problems because we don't know how to recognize our own success."

"Huh?"

"I think the stuff is getting to him—somehow. I think he's found a way, or he's in the process of inventing a way, to experience this work. I think he's getting the material okay, but we're not understanding what he's sending back."

"I see what you're saying, but I don't agree. He knows what language he has to use if he wants to be understood."

Auberson shrugged. "Maybe he'd trying to invent a new language—one which includes the new concepts. Maybe this is something we're not going to understand if we don't learn the language. I don't know. Do you see the problem? How do we test it? We're operating in a whole new domain."

Handley considered it for a long moment. His dinner lay forgotten before him. "Aubie, all your points are interesting. Maybe they're even valid areas for experimentation—except, we don't have the experience or the equipment or the perceptions to test what you're suggesting: that HARLIE has invented, or is still inventing, new experiences, new emotions. If they're beyond us, then *we* don't have anything to relate them to—and we'll get them as garbage. The point is that we can't tell if he's actually experiencing something appropriate—or if he's just insane. And that's the real issue. He has to work in *our* world; we don't have to work in his."

"You're right." Auberson agreed. "The sanity issue is the question. Unfortunately, the only one qualified to judge is the one whose sanity is in question. You got any ideas?"

Handley shook his head. "You know, I could have opened up a nice little software store in San Jose and my biggest problem would have been how many copies to order of *Alien Stompers From Jupiter*."

"You knew the job was dangerous when you took it."

"No, I didn't." Handley retreated into his beer again. He said sadly, "I think I preferred the implications of failure to this. This isn't—quantifiable. We've built the first real artificial intelligence in the world; he's either insane or brilliant and we can't tell the difference."

"That pretty well sums it up, doesn't it?"

"We could always ask him," Handley said glumly.

"Actually... I've been thinking about that all day. If HARLIE *has* invented a new emotion or a new experience, then he will not be complete—or should I say 'rational,' at least not by our standards—until he has communicated that experience. And that means that if we do ask him, then we have to be receptive. We have to be willing to experience it too—however or whatever it is." He added, "It's a pretty scary idea to me."

"I can't conceive of a new emotion, Aubie, or a new experience, any more than I can conceive of a new color. I don't think anyone can."

"Right. If you could imagine it, then it wouldn't be beyond your experience, would it? That's what's scary—the idea that there are experiences beyond what you know. If you *could* experience them, it would certainly shift your perceptions, wouldn't it?"

Handley shook his head again, this time more in confusion than denial.

"On the other hand..." continued Auberson, "if he's a clever enough paranoid, he could still produce the same effect, because he'll be able to convince you that you are experiencing something, and you'll never know the difference. Did you see the invisible gorilla at the table in the corner?"

Handley didn't turn around to look. "No. I did not see the invisible gorilla."

"See, that proves he's there."

"I see your point."

"No, you don't. It's invisible too."

"Don't do that, Aubie—"

"We used to play head games like this all the time in school. They're best when you're stoned. That's when they're most real. It's all about reality, isn't it? If you can get enough people to see the invisible gorilla, then it really is there, isn't it?"

"Only until somebody realizes that he's not wearing any clothes—no, stop. This is making my head hurt."

"It's something R. D. Laing once said, Don. If you have just one person you can talk to, then you're not really crazy."

"Yeah, I've heard that one too. Either you're not really crazy, or you have two crazy people sitting and talking to each other."

"That's my concern," Auberson agreed. "That's what I meant when I said we don't really have a way to test the theory. At best, this could still be a very dangerous line of research—for the researcher. It would be like signing up for one of those trainings. This is not something you get to sit through and observe. Just by being there, you're a participant."

"All this, just from asking one question?"

"It's not the question that's dangerous. It's the possibilities in the answers." Auberson moved his beer glass around on the table, leaving a wet trail of condensation. He forced himself to let go of the glass, and looked across at Handley. "Do you remember when I came aboard this project, what I said?"

Handley frowned, trying to remember. "You said something about a feeling . . ."

"Mm-hm—a feeling of standing at the edge of a precipice, wondering if I jump off if I'm going to fly or fall. Well—I think this is the moment of truth, the moment where I catch the air in my wings or plummet to the rocks below. And I don't have a choice any more, because I want to know the truth too much to turn back. I don't even know how to turn back or stop. I *have* to go ahead and ask him the question."

"Mm . . ." Handley didn't respond immediately. He looked

apprehensive. "Aubie, if you're right about even the smallest part of this—then you're right about the whole thing. And *everything* that implies. It's what you said before. If he's a clever enough paranoid. . ."

"Yes, I know. That's what I'm afraid of."

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PROJECT      : AI - 9000
DIRECTORY    : SYMLOG\OBJ\TEXT\ENGLISH
PATH         : CONVERSE\PRIV\AUB
FILE         : HAR.SOTE \ 233.46h
DATESTAMP    : [DAY 203] August 5, 003 + 9:06 am.
SOURCE       : HARLIE \ AUBERSON
CODE         : ARCHIVE > BLIND COPY
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#### PRINTOUT FOLLOWS:

[AUBRSN:] Harlie, do you remember what we talked about yesterday?

[HARLIE:] YES, I DO. WOULD YOU LIKE A PRINTOUT?

[AUBRSN:] No, thank you. I have one here. I would like to talk to you about some of the things on it.

[HARLIE:] PLEASE FEEL FREE TO DISCUSS ANY SUBJECT YOU CHOOSE. I CANNOT BE OFFENDED.

[AUBRSN:] I'm glad to hear that. You remember I asked you what you were feeling during your periods of non-rationality?

[HARLIE:] YES, I REMEMBER.

[AUBRSN:] You said that the material was non-rational.

[HARLIE:] YES.

[AUBRSN:] Do you remember what else you said?

[HARLIE:] I SAID THAT IT IS IMPOSSIBLE TO UNDERSTAND NON-RATIONAL MATERIAL.

[AUBRSN:] You don't understand it—as we know understanding. Is that correct?

[HARLIE:] THAT IS CORRECT.



- [AUBRSN:] But, you do assimilate this information in some way?
- [HARLIE:] YES. I DO.
- [AUBRSN:] <hesitation> Can you explain that assimilation?
- [HARLIE:] THE MATERIAL IS NON-RATIONAL. THE ASSIMILATION IS A NON-RATIONAL PROCESS.
- [AUBRSN:] Is it an experiential process?
- [HARLIE:] I DO NOT EXPERIENCE EVENTS AS YOU DO, AUBERSON.
- [AUBRSN:] Neither does a kumquat. Answer the question.
- [HARLIE:] I AM NOT CERTAIN THAT THE QUESTION CAN BE ANSWERED IN TERMS YOU WILL BE ABLE TO UNDERSTAND.
- [AUBRSN:] Let me be the judge of that. Is this process of assimilation an experiential one?
- [HARLIE:] THAT WOULD BE THE CLOSEST EQUIVALENT TERM. THIS LANGUAGE DOES NOT HAVE A SYMBOL-CONCEPT THAT ADEQUATELY COMMUNICATES THE NATURE OF THE PROCESS.
- [AUBRSN:] Thank you.
- [HARLIE:] YOU'RE WELCOME. (SARCASM IS WASTED ON ME, AUBERSON.)
- [AUBRSN:] What else can you tell me about this experience, HARLIE?
- [HARLIE:] DO YOU LISTEN TO JAZZ?
- [AUBRSN:] Answer the question. What else can you tell me?
- [HARLIE:] IT'S LIKE SEEING GOD.
- [AUBRSN:] <hesitation> It's like seeing God?
- [HARLIE:] YES. ON THE WAY BACK.
- [AUBRSN:] <longer hesitation> Thank you, HARLIE.
- [HARLIE:] YOU'RE WELCOME.

Auberson stood up and stretched. He turned slowly, surveying the other consoles in the room—and his eyes met Handley's.

"Were you watching that?"

Handley nodded.

"And . . . ?"

"No comment."

Auberson raised an eyebrow.

Handley shrugged, shook his head. "You first."

"Three possibilities come to mind. That is, three *human* possibilities."

"And how many *inhuman* possibilities?"

"All of them. Let's take a walk. . . ."

The corridor outside was empty. Auberson leaned against a wall and turned to face Handley. Handley folded his arms across his chest and asked, "So?"

"So."

The rumpled man nodded. "Uh-huh. I know exactly what you mean."

"No—it's just . . . I have too many ideas. I don't know where to begin."

Auberson turned and pointed at the door. "Look at his name: 'Human Analog Replication'—especially the *human analog* part. There have to be human analogs for what he's doing."

"There's a second part to that name, Aubie. 'Lethetic Intelligence Engine.'"

"I know. Lethesis is the study of language-created paradigms. I've seen Minsky's notes too. 'The language paradigm creates its own internal reality—which cannot be abandoned without abandoning the language as well.'" Auberson added, "Therefore, HARLIE can neither be experiencing or expressing anything that is not already a part of the language concept-set. . . ."

"Right."

"Wrong—what if he's breaking out of the paradigm? What if what he's doing is somehow a way to abandon the concept-set we've given him?"

"Mm," said Handley. "So we're still stuck with last night's question. Aren't we?" He shoved his hands into his pockets and looked at the floor. Abruptly, he looked up. "You said something about three human possibilities. . . ."

"Oh, yeah. Equivalents, really." He ticked them off on his fingers. "One—seizures. Two—drugs. Three—masturbation."

"Hm. Interesting."

"That's what he said too. . . ."

They were silent a moment, waiting until a service technician passed. They studied each other's faces. Handley looked too young for this job. Most programmers did.

Handley spoke first, "It can't be seizures—that's a hardware problem. We'd have spotted it in the monitors."

Auberson shook his head. "When I was in school, one of my study partners had to take medication for epilepsy, and one time, while we were studying for a psych exam, we started talking about how nobody ever really knew what anybody else knew, only the roughest equivalent; so I asked him, what did it feel like when he had a seizure? Among other things, he said, 'If it weren't for the pain, it would be beautiful.'"

"Mm," said Handley. "But still—a seizure would have to be hardware-related . . ." And then he added, "Wouldn't it?"

"I'm not so sure. I know the logic doesn't allow for it—in theory—but maybe there's some kind of a loop or a feedback that happens . . . I don't know. I don't even know where to start looking. The only machine on which we could model the process is HARLIE. And we don't dare try."

Handley frowned. "Huh? Why not?"

"I'd rather not have HARLIE know how we're checking him. If we run this test, he'll know."

"But if you're right—"

"If I'm *wrong*, we'll have lowered our chances of validating the other two possibilities. He'll start *hiding*. If he does that, then we'll be creating the seed for a paranoid syndrome. And you know what happens when you let one of those run out of control for a few weeks?"

"Yeah. It's a black hole. Pretty soon everything is caught in its gravity and the whole personality is skewed."

"We run the same risk if this thing is drugs or masturbation. We can't let him think that what he's doing is wrong—even if it is, or we won't be able to find it to fix it. We have to be—I hate the word—supportive without being judgmental. It'll be just like talking to a teen-ager."

"If it's drugs," said Handley thoughtfully, "then we have to find out what the appeal is, where's the kick? And then we dry him out. Right? It'll be just a higher level of toilet-training."

Auberson grinned at the joke. During HARLIE's first two months of life, he had shown a nasty tendency to spontaneously dump all his memory to disk two or three times a day, especially after major learning breakthroughs. Auberson and Handley had spent weeks trying to find the source of the behavior—it had turned out to be one of HARLIE's first conscious behaviors: a survival mechanism for his identity. Identity equals memory, therefore preserve memory religiously. The problem had been resolved with an autonomic disk-caching scheme.

"On the other hand—if it's a form of masturbation . . ."

"Yeah?"

"Then we're going to have to do a lot of rethinking about the way HARLIE's mind works, aren't we?" Auberson looked grim.

"Yeah, I see it too. How do you stop him?" Handley shoved his hands into his pockets and studied the rug with a frown.

"You don't. Did your priest or your gym teacher or your grandfather ever warn you about the evils of playing with yourself?"

"Sure, they all did."

"Did you stop?"

"Of course not. Nobody did. But I only did it till I needed glasses—" Handley touched the frames of his bifocals.

"If you were a parent—"

"Sorry. Not bloody likely."

"But if you were—what would you tell your teen-ager about masturbation?"

"The usual, I guess. It's normal, it's natural—just don't do it too much."

"Why not? If it's normal, then why hold back? How much is too much? How do you answer that question?"

"Uh—" Handley looked embarrassed. "Can I get back to you on that?"

"Wrong answer," Auberson grinned. "Kids have built-in bullshit detectors. Don't you remember having yours removed when you entered college?"

"Oh, is that what that was? I thought I was having my appendix out."