Key Item By Isaac Asimov

Jack Weaver came out of the vitals of Multivac looking utterly worn and disgusted.

From the stool, where the other maintained his own stolid watch, Todd Nemerson said, "Nothing?"

"Nothing," said Weaver. "Nothing, nothing, nothing. No one can find anything wrong with it."

"Except that it won't work, you mean." "You're no help sitting there!" "I'm thinking." "Thinking!" Weaver showed a canine at one side of his mouth. Nemerson stirred impatiently on his stool. "Why not? There are six teams of computer

technologist roaming around in the corridors of Mulitvac. They haven't come up with anything in three days. Can't you spare one person to think?"

"It's not a matter of thinking. We've got to look. Somewhere a relay is stuck." "It's not that simple, Jack!" "Who says it's simple? You know how many million relays we have there?" "That doesn't matter. If it were just a relay, Multivac would have alternate circuits,

devices for locating the flaw, and facilities to repair or replace the ailing part. The trouble is, Mulitvac won't only not answer the original question, it won't tell us what's wrong with it.— And meanwhile, there'll be panic in every city if we don't do something. The world's economy depends on Mulitvac, and everyone knows that."

"I know it, too. But what's there to do?"

"I told you, *think*. There must be something we're missing completely. Look, Jack, there isn't a computer bigwig in a hundred years who hasn't devoted himself to making Mulitvac more complicated. It can do so much now—it can even talk and listen. It's practically as complex as the human brain. We can't understand the human brain, so why should we understand Mulitvac?"

"Aw, come on. Next you'll be saying Multivac is human."

1

"Why not?" Nemerson grew absorbed and seemed to think into himself. "Now that you mention it, why not? Could we tell if Mulitvac passed the thin dividing line where it

stopped being a machine and started being human? *Is* there a dividing line, for that matter? If the brain is just more complex than Multivac, and we keep making Multivac more complex, isn't there a point where..." He mumbled down into silence.

Weaver said impatiently, "What are you driving at? Suppose Multivac were human. How would that help us find out why it isn't working?"

"For a human reason, maybe. Suppose *you* were asked the most probable price of wheat next summer and didn't answer. Why wouldn't you answer?"

"Because I wouldn't know. But Multivac would know! We've given it all the factors. It can analyze futures in weather, politics, and economics. We know it can. It's done it before."

"All right. Suppose I asked the question and you knew the answer but didn't tell me. Why not?"

Weaver snarled, "Because I had a brain tumor. Because I had been knocked out. Because my machinery was out of order. That's just what we're trying to find out about Multivac. We're looking for the place where its machinery is out of order, for the key item."

"Only you haven't found it." Nemerson got off his stool. "Listen, ask me the question Multivac stalled on."

"How? Shall I run the tape through you?"

"Come on, Jack. Give me the talk that goes along with it. You do talk to Multivac, don't you?"

"I've got to. Therapy."

Nemerson nodded. "Yes, that's the story. Therapy. That's the official story. We talk to it in order to pretend it's a human being so that we don't get neurotic over having a machine know so much more than we do. We turn a frightening metal monster into a protective father image."

"If you want to put it that way."

"Well, it's wrong and you know it. A computer as complex as Multivac *must* talk and listen to be efficient. Just putting in and taking out coded dots isn't sufficient. At a certain level of complexity, Multivac must be made to seem human because, it *is* human. Com on, Jack, ask me the question. I want to see my reaction to it."

2

Jack Weaver flushed. "This is silly." "Come on, will you?" It was a measure of Weaver's depression and desperation that he acceded. Half sullenly,

he pretended to be feeding the program into Multivac, speaking as he did so in his usual manner. He commented on the latest information concerning farm unrest, talked about the new equations describing jet-stream contortions, lectured on the solar constant.

He began stiffly enough, but warmed to this task out of long habit, and when the last of the program was slammed home, he almost closed contact with a physical snap at Todd Nemerson's waist.

He ended briskly, "All right, now. Work that out and give us the answer pronto."

For a moment, having done, Jack Weaver stood there, nostrils flaring, as though he was feeling once more the excitement of throwing into action the most gigantic and glorious machine ever put together by the mind and hands of man.

Nemerson said, "At least I know why *I* wouldn't answer, so let's try that on Multivac. Look, clear Multivac; make sure the investigators have their paws off it. Then run the program into it and let me do the talking. Just once."

Weaver shrugged and turned to Multivac's control wall, filled with its somber, unwinking dials and lights. Slowly he cleared it. One by one, he ordered the teams away.

Then, with a deep breath, he began once more feeding the program into Mulitvac. It was the twelfth time all told, the dozenth time. Somewhere a distant news commentator would spread the word that they were trying again. All over the world a Multivac-dependent people would be holding its collective breath.

Nemerson talked as Weaver fed the data silently. He talked diffidently, trying to remember what it was that Weaver had said, but waiting for the moment when the key item might be added.

Weaver was done and now a note of tension was in Nemerson's voice. He said, "All right, now, Multivac. Work that out and give us the answer." He paused and add3ed the key item. He said, "*Please!*"

And all over Multivac, the valves and relays went joyously to work. After all, a machine has feelings, when it isn't a machine anymore.