

The greatest science fiction
writer of the modern age

ROBERT A. HEINLEIN

THE MOON IS A HARSH MISTRESS

His classic,
Hugo Award-winning novel
of libertarian revolution

**THE MOON IS A
HARSH MISTRESS**

by Robert A. Heinlein

Copyright 1966 by Robert A. Heinlein

All rights reserved.

A short version of this novel appeared in

The Worlds of If magazine.

Copyright 1965, 1966 by Robert A. Heinlein.

SBN 425-03850-5

G.P. Putnam's-Berkley Medallion Edition, September 1968.

For Pete and Jane Sencenbaugh

Contents

Book One - THAT DINKUM THINKUM

1

2

3

4

5

6

7

8

9

10

11

12

13

Book Two - A RABBLE IN ARMS

14

15

16

17

18

19

20

[21](#)

[22](#)

[Book Three - "TANSTAAFL!"](#)

[23](#)

[24](#)

[25](#)

[26](#)

[27](#)

[28](#)

[29](#)

[30](#)

Book One - THAT DINKUM THINKUM

1

I see in Lunaya Pravda that Luna City Council has passed on first reading a bill to examine, license, inspect—and tax—public food vendors operating inside municipal pressure. I see also is to be mass meeting tonight to organize “Sons of Revolution” talk-talk.

My old man taught me two things: “Mind own business” and “Always cut cards.” Politics never tempted me. But on Monday 13 May 2075 I was in computer room of Lunar Authority Complex, visiting with computer boss Mike while other machines whispered among themselves. Mike was not official name; I had nicknamed him for Mycroft Holmes, in a story written by Dr. Watson before he founded IBM. This story character would just sit and think—and that’s what Mike did. Mike was a fair dinkum thinkum, sharpest computer you’ll ever meet.

Not fastest. At Bell Labs, Bueno Aires, down Earthside, they’ve got a thinkum a tenth his size which can answer almost before you ask. But matters whether you get answer in microsecond rather than millisecond as long as correct?

Not that Mike would necessarily give right answer; he wasn’t completely honest.

When Mike was installed in Luna, he was pure thinkum, a flexible logic —“High-Optional, Logical, Multi-Evaluating Supervisor, Mark IV, Mod. L”—a HOLMES FOUR. He computed ballistics for pilotless freighters and controlled their catapult. This kept him busy less than one percent of time and Luna Authority never believed in idle hands. They kept hooking hardware into him—decision-action boxes to let him boss other computers, bank on bank of additional memories, more banks of associational neural nets, another tubful of twelve-digit random numbers, a greatly augmented temporary memory. Human brain has around ten-to-the-tenth neurons. By third year Mike had better than one and a half times that number of neuristors.

And woke up.

Am not going to argue whether a machine can “really” be alive, “really” be self-aware. Is a virus self-aware? Nyet. How about oyster? I doubt it. A cat? Almost certainly. A human? Don’t know about you, tovarishch, but I am. Somewhere along evolutionary chain from macromolecule to human brain self-awareness crept in. Psychologists assert it happens automatically whenever a brain acquires certain very high number of associational paths. Can’t see it matters whether paths are protein or platinum.

(“Soul?” Does a dog have a soul? How about cockroach?)

Remember Mike was designed, even before augmented, to answer questions tentatively on insufficient data like you do; that’s “high optional” and “multi-evaluating” part of name. So Mike started with “free will” and acquired more as he was added to and as he learned—and don’t ask me to define “free will.” If comforts you to think of Mike as simply tossing random numbers in air and switching circuits to match, please do.

By then Mike had voder-vocoder circuits supplementing his read-outs, print-outs, and decision-action boxes, and could understand not only classic programming but also Loglan and English, and could accept other languages and was doing technical translating—and reading endlessly. But in giving him instructions was safer to use Loglan. If you spoke English, results might be whimsical; multi-valued nature of English gave option circuits too much leeway.

And Mike took on endless new jobs. In May 2075, besides controlling robot traffic and catapult and giving ballistic advice and/or control for manned ships, Mike controlled phone system for all Luna, same for Luna-Terra voice & video, handled air, water, temperature, humidity, and sewage for Luna City, Novy Leningrad, and several smaller warrens (not Hong Kong in Luna), did accounting and payrolls for Luna Authority, and, by lease, same for many firms and banks.

Some logics get nervous breakdowns. Overloaded phone system behaves like frightened child. Mike did not have upsets, acquired sense of humor instead. Low one. If he were a man, you wouldn’t dare stoop over. His idea of thigh-slapper would be to dump you out of bed—or put itch powder in pressure suit.

Not being equipped for that, Mike indulged in phony answers with skewed logic, or pranks like issuing pay cheque to a janitor in Authority’s Luna City office for

of pranks like issuing pay cheque to a janitor in Authority's Luna City office for AS\$10,000,000,000,000,185.15--last five digits being correct amount. Just a great big overgrown lovable kid who ought to be kicked.

He did that first week in May and I had to troubleshoot. I was a private contractor, not on Authority's payroll. You see---or perhaps not; times have changed. Back in bad old days many a con served his time, then went on working for Authority in same job, happy to draw wages. But I was born free.

Makes difference. My one grandfather was shipped up from Joburg for armed violence and no work permit, other got transported for subversive activity after Wet Firecracker War. Maternal grandmother claimed she came up in bride ship—but I've seen records; she was Peace Corps enrollee (involuntary), which means what you think: juvenile delinquency female type. As she was in early clan marriage (Stone Gang) and shared six husbands with another woman, identity of maternal grandfather open to question. But was often so and I'm content with grandpappy she picked. Other grandmother was Tatar, born near Samarkand, sentenced to "re-education" on Oktyabrakaya Revolyutsiya, then "volunteered" to colonize in Luna.

My old man claimed we had even longer distinguished line—ancestress hanged in Salem for witchcraft, a g'g'g'greatgrandfather broken on wheel for piracy, another ancestress in first shipload to Botany Bay.

Proud of my ancestry and while I did business with Warden, would never go on his payroll. Perhaps distinction seems trivial since I was Mike's valet from day he was unpacked. But mattered to me. I could down tools and tell them go to hell.

Besides, private contractor paid more than civil service rating with Authority. Computermen scarce. How many Loonies could go Earthside and stay out of hospital long enough for computer school?--even if didn't die.

I'll name one. Me. Had been down twice, once three months, once four, and got schooling. But meant harsh training, exercising in centrifuge, wearing weights even in bed—then I took no chances on Terra, never hurried, never climbed stairs, nothing that could strain heart. Women—didn't even think about women; in that gravitational field it was no effort not to.

But most Loonies never tried to leave The Rock—too risky for any bloke who'd been in Luna more than weeks. Computermen sent up to install Mike were on short-term bonus contracts—get job done fast before irreversible physiological change marooned them four hundred thousand kilometers from home.

But despite two training tours I was not gung-ho computerman; higher maths are beyond me. Not really electronics engineer, nor physicist. May not have been best micromachinist in Luna and certainly wasn't cybernetics psychologist.

But I knew more about all these than a specialist knows—I'm general specialist. Could relieve a cook and keep orders coming or field-repair your suit and get you back to airlock still breathing. Machines like me and I have something specialists don't have: my left arm.

You see, from elbow down I don't have one. So I have a dozen left arms, each specialized, plus one that feels and looks like flesh. With proper left arm (number-three) and stereo loupe spectacles I could make untramicrominiature repairs that would save unhooking something and sending it Earthside to factory—for number-three has micromanipulators as fine as those used by neurosurgeons.

So they sent for me to find out why Mike wanted to give away ten million billion Authority Scrip dollars, and fix it before Mike overpaid somebody a mere ten thousand.

I took it, time plus bonus, but did not go to circuitry where fault logically should be. Once inside and door locked I put down tools and sat down. "Hi, Mike."

He winked lights at me. "Hello, Man."

"What do you know?"

He hesitated. I know—machines don't hesitate. But remember, Mike was designed to operate on incomplete data. Lately he had reprogrammed himself to put emphasis on words; his hesitations were dramatic. Maybe he spent pauses stirring random numbers to see how they matched his memories.

"In the beginning," Mike intoned, "God created the heaven and the earth. And the earth was without form, and void; and darkness was upon the face of the

deep. And—“

“Hold it!” I said. “Cancel. Run everything back to zero.” Should have known better than to ask wide-open question. He might read out entire Encyclopaedia Britannica. Backwards. Then go on with every book in Luna. Used to be he could read only microfilm, but late ‘74 he got a new scanning camera with suction-cup waldoes to handle paper and then he read everything.

“You asked what I knew.” His binary read-out lights rippled back and forth—a chuckle. Mike could laugh with voder, a horrible sound, but reserved that for something really funny, say a cosmic calamity.

“Should have said,” I went on, “‘What do you know that’s new?’ But don’t read out today’s papers; that was a friendly greeting, plus invitation to tell me anything you think would interest me. Otherwise null program.”

Mike mulled this. He was weirdest mixture of unsophisticated baby and wise old man. No instincts (well, don’t think he could have had), no inborn traits, no human rearing, no experience in human sense—and more stored data than a platoon of geniuses.

“Jokes?” he asked.

“Let’s hear one.”

“Why is a laser beam like a goldfish?”

Mike knew about lasers but where would he have seen goldfish? Oh, he had undoubtedly seen flicks of them and, were I foolish enough to ask, could spew forth thousands of words. “I give up.”

His lights rippled. “Because neither one can whistle.”

I groaned. “Walked into that. Anyhow, you could probably rig a laser beam to whistle.”

He answered quickly, “Yes. In response to an action program. Then it’s not funny?”

“Oh. I didn’t say that. Not half bad. Where did you hear it?”