

Galaxy

SCIENCE FICTION

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THE
COMING
OF THE
ROBOTS

By
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OPERATION
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THE
VICTIM
FROM
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•
AND
OTHER STORIES

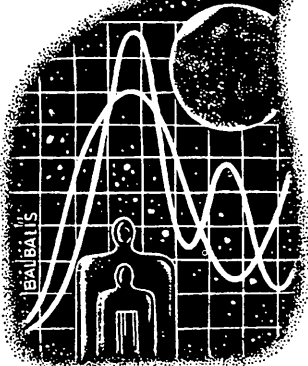




**for
your
information**

BY WILLY LEY

**THE COMING
OF THE ROBOTS**



AT THE time when Rudolph II of Habsburg was Holy Roman Emperor, there lived in the city of Prague a rabbi who was so highly respected by everybody who knew him that posterity—and possibly even his contemporaries—referred to him as High Rabbi Loew. One day a messenger from the emperor arrived with the im-

perial request that Rabbi Judah Loew with companions of his choosing was to be at the Hradcany Castle on a specific date.

The day was the 23rd of February, 1592, and Rabbi Loew went to the castle. He took with him his brother, Rabbi Sinai, and his son-in-law, Isak Kohen. At the castle, Rabbi Loew was brought into a room where Prince Bertier was waiting for him. The other two men were signaled to sit in a corner, some distance away. But, as Kohen reported later, the prince spoke very loudly and Rabbi Loew, presumably suspecting that the prince was hard of hearing, answered in an equally loud voice. The two witnesses could understand every word, even though they were in a far corner.

All at once, the reason for the loud speaking became clear. One of the drapes parted and the emperor himself appeared and joined in the conversation.

These few facts and the date are all we know about the audience. Probably everybody present had to vow secrecy. There is nothing about the discussion in the court's records. Isak Kohen did not say a word beyond what has just been related. And the astronomer David Gans, a friend of Tycho Brahe, who had some dealings with Rabbi Loew, said that the rabbi himself also never

mentioned a word about the meeting.

My reason for telling all this is that High Rabbi Judah Loew of Prague is credited by legend with having made the first robot in history.

THE topic came up for discussion on a hot day in summer, 1956, when Fritz Lang was in New York and we were both sitting somewhat impatiently in his hotel room waiting for room service. The fact that we had to wait led to idle talk about liquor organs, the possibilities of mechanized room service. From there, it was only a short step to serving robots and Fritz Lang abruptly said: "Say, the golem must have been the first robot."

We tried to find an older one, but except for the magic head which Roger Bacon is supposed to have made and which burst into splinters after uttering one word or one sentence, we could not think of any.

That golem we discussed was supposed to have been a man made of clay and endowed with a kind of pseudo-life by Rabbi Loew. The golem was able to hear, but it could not speak. It was not very bright, but intensely loyal. It never needed sleep, although it feigned sleep quite often, and had enormous strength. Fire or water did not harm it.

But there was one problem: it had been created by magic, which in itself was a sin.

But the sin would be tolerated if it was only used for religious purposes. When somebody — the rabbi's wife was the first to make that mistake — issued an order for personal convenience or other secular matters, the golem would inevitably misperform. (The story of the endless water-carrying which we know as the basis of "sorcerer's apprentice" was told about the golem.)

Legend says that after the audience with Emperor Rudolph II, the rabbi declared, "We no longer need Jossle Golem," and that he and another son-in-law of his named Jakob Katz and his pupil Jakob Sosson took the golem to the attic of the Altneu Synagogue in Prague and recited the requisite spells to take its pseudo-life away from it.

In the legends that formed later — they have been collected several times — the audience with the emperor is taken to have ended the golem's career. But from the strictly historical standpoint, it seems that this audience was, so to speak, the birthday of the golem. The fact that a rabbi was called to the emperor was such an unusual event that it had to have some very special significance.

Well, every child in Prague

and also elsewhere where German was spoken — it is a somewhat strange fact that the legends hardly penetrated the language barrier; they remained restricted to Jewish and Christian German-speaking circles — had heard about the golem at one time, if only because there is a reference to it in classical German literature. But the story that the "corpse" of the golem stayed in the attic of the Altneu Synagogue seemed to have been restricted to Prague, as a local legend.

One who heard it, probably in early childhood, was a man named Egon Erwin Kisch, who became a famous journalist. But he never used the story journalistically as long as he stayed in Prague.

WHEN the First World War came, Kisch was drafted into the Austrian Army. He spent most of the year 1915 in the Carpathian Mountains. There he met a man who at first was as sullen as possible and did not wish to have any truck with soldiers, any kind of soldiers, no matter what their nationality, uniform or rank.

But when he heard, one day, that Kisch had been born in Prague and had lived there most of his life, he warmed up. Prague was the city he most wanted to go to. He wanted to see the grave of Rabbi Loew and worship in



Fig. 1: Paul Wegener as the Golem in a silent German picture of that title, made in the early 1920's

the Altneu Synagogue. It turned out that he collected everything about the golem that came his way and he finally showed Kisch a manuscript he had bought from a traveling peddler.

The manuscript alleged to tell what had happened to the golem after the rabbi had removed its pseudo-life. It told how the temple servant of the Pinkas Synagogue (also in Prague), Abraham ben Secharja by name, approached his opposite number in the Altneu Synagogue with the proposal to steal the dead golem. Abraham Chajim of the Altneu Synagogue was finally persuaded to cooperate, since Abraham Chajim learned that his son-in-law,

one Ascher Balbierer, knew formulas from the *Sohar* which would revive the golem.

They allegedly brought the golem's body to the basement of Balbierer's house, but whatever they tried, nothing helped—the golem remained dead.

Then an epidemic (diphtheria, in all likelihood, from the description) came and two of the five children of Ascher Balbierer died. Whereupon the mother of the two dead children put her foot down, blaming the presence of the golem for the bereavement, and forced her husband and his friends to dispose of the clay figure.

A soldier in the front lines has worries enough and Kisch temporarily forgot the whole story. But after the war, when he was back in Prague, he decided to satisfy his curiosity and sell a few articles in the process. He applied for permission to visit the attic of the Altneu Synagogue to look for the golem. Permission was refused. He pulled different strings. Permission was not refused this time; it was pointed out to him that there was no staircase from the interior of the synagogue to the attic.

Well, how could one get in? Only by climbing the building from the outside on an iron ladder which started some eight feet above the ground. But he couldn't

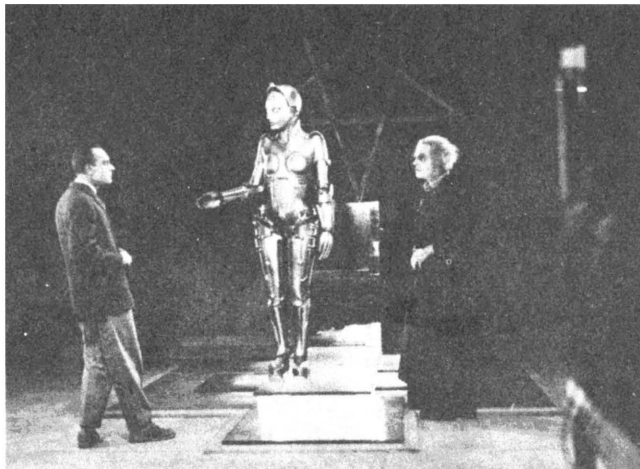


Fig. 2: Brigitte Helm as the robot in Fritz Lang's *Metropolis*

(Courtesy: Fritz Lang)



Fig. 3: The robot Brigitte is thirsty between takes. (This picture has never been published before)

(Courtesy: Fritz Lang)

do that. Nobody was permitted to do it.

SOME more activity on the part of a journalist with a well-known name finally made the permission come through. On a bright day, and with more audience than Kisch wished for, he climbed the building and finally entered the attic. As he reported, the room was anything but gloomy and mysterious. Several large windows admitted much sunlight, and since the building was old and small, its attic was not even above the roofs of other

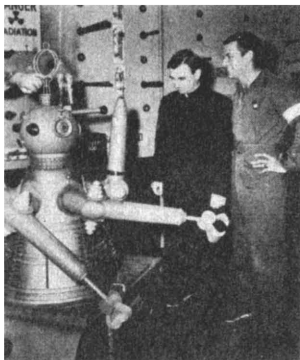


Fig. 4: The non-anthropoid robot Gog from the picture of the same name
(Courtesy: Ivan Tors and United Artists)

buildings. The most medieval thing he saw was a small bat hanging upside down from a rafter, sound asleep. No golem.

Then he traced the way described in the manuscript which the abductors of the golem were supposed to have walked, both when stealing it and when finally disposing of it. Yes, the streets were as the manuscript had told. But the final destination was a kind of dump where the golem could never have been found, provided that it had existed and provided that its clay body had lasted through 300 odd years of internment.

Just to round out the story, Kisch checked on the graves in the Jewish cemetery. He knew

that Rabbi Loew's grave was there. He found those of his pupils. He even found the tombstone of Abraham ben Secharja, stating that he had died in 1602 after serving his synagogue for 30 years.

Kisch wrote the story of his failure. It was published and his report on the golem was directly responsible for the conception of the robots. It was another Prague journalist, Karel Capek, who invented the term. Kisch was bilingual, but was writing in German. Capek was bilingual, too, but wrote in Czech.

Whether the play *R.U.R.* (*Rossum's Universal Robots*) was written originally in German or in Czech is something I don't know. I saw a German version when it was new. Present science fiction fans, knowing that this play introduced an important concept into science fiction, seem to feel that it is one of the classical pieces written for the stage and long to see it performed.

If they should have a chance to see it, they are almost certain to be disappointed. When first performed in Europe around 1922 or 1923, it received bad notices. To make it worse, the panning was deserved. The play was talkative, "preachy," stuffed with the falsest pathos that could be devised. But the term robot (derived from the root word *robot*,

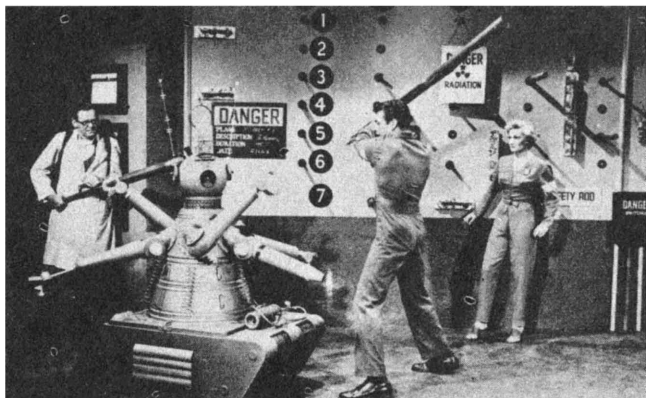


Fig. 5: The robot Gog attacks

(Courtesy: Ivan Tors and United Artists)

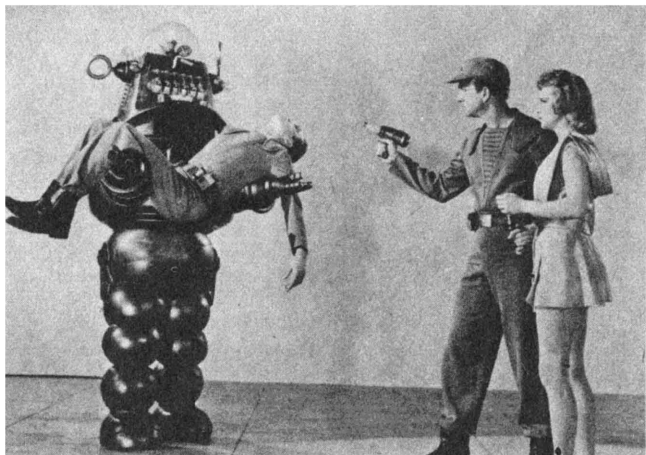


Fig. 6: Robby the Robot from M.G.M.'s *Forbidden Planet*

(Courtesy Metro-Goldwyn-Mayer)

meaning "work") has persisted.

The movies, still silent, eyed the new concept, but decided first to bring the golem to the screen directly. It was made by a German firm in the early 'twenties (Fig. 1) and when I think back to it, I always have the feeling that it must have been made by Fritz Lang. Of course I know that he didn't, but it was that type of picture and equally impressive, although my impression now — more than 30 years later — tends to be rather general and more than somewhat hazy.

The movie differed from the legends mainly in the way the golem finds its end. In the movie version, the magic word is imbedded in a capsule on its chest. Running wild, the golem refuses to have it removed. But wandering away from the city, the golem meets a child who offers it an apple. It picks the child up, and the child pulls the capsule from its chest.

BEFORE leaving the golem, I would like to add a linguistic remark. Eastern Jews tend to pronounce the name as "goylem" and have evolved "folk etymology" that the clay figure was called a "goy" (non-Jew) since it obviously was not Jewish. I checked with a dictionary — this piece of layman's etymology is nonsense. The word golem is a



Fig. 7: Robby the Robot as driver of a futuristic car
(Courtesy: Metro-Goldwyn-Mayer)

genuine Hebrew word, meaning "the germ" or "the formless one" or, stretching the analogy to formlessness a bit, "the fool."

I do not know when a robot appeared for the first time in a science fiction story. The first robot on the screen was very pretty, bore the name of Brigitte Helm (a shortened version of her real name) and was the creation of Fritz Lang in *Metropolis*. Even though the armor had been made form-fitting (Figs. 2 and 3) as accurately and as light as possible, the poor girl could not wear it for long.

Although labeled a creation of science rather than magic, in the film there were still plenty of mystical overtones and ground-

swells. At least I have never seen a laboratory with a glowing pentagram on the wall; the real laboratories even avoid a picture of the Pentagon.

A successful and therefore universally known work of art of any description tends to monopolize a concept for quite a while. As I pointed out once, the fact that Giacomo Meyerbeer used the Tree of Death in the final scene of his opera *l'Africaine* prevented every other composer and librettist from doing the same. If anybody had used the Tree of Death, he would have been accused of cribbing from Meyerbeer, even though he might not have known the opera and gotten his theme directly from Erasmus Darwin, who had publicized it in his *Loves of the Plants*.

Similarly, the robot concept, sub-family movie robots, suffered the same fate because of *Metropolis*.

However, the movies apparently felt that they had to do something along that line, with the result that an evil genius dug up the tale of Frankenstein and his monster.

THE original story had originated in 1816 as one of the results of a literary discussion. The author of the original *Frankenstein*, still Miss Mary Godwin at the time, the poet Shelley, who

was her future husband, the poet Lord Byron, Dr. John W. Polidori, and a few other people were all in Geneva and one day voted that everybody in the party should write a story of the supernatural. Not everybody who agreed to do so finished his story, but among the ones that were finished was *Frankenstein*.

The plot is about as simple as possible. Mr. Frankenstein, who has stumbled across the "secret of life," uses raw material from graves and dissecting rooms to put an eight-foot-tall manlike thing together which, when it comes to life, frightens its own creator out of his wits, even though it is friendly and harmless, merely too big and too ugly to be tolerable.

It would be interesting if one could find out whether Mary Shelley had heard of the golem legend. It is possible because the German dramatist and novelist Clemens Brentano had written about it just at that time. There are some similarities.

Many science fiction authors and readers make a distinction between robots and androids, while others say that there is no sharp borderline. Moreover, if one made that distinction, the robots in Capek's *R. U. R.* would be androids. Perfectly correct—they were. Capek naturally could not foresee what would happen

to the word he coined. Personally, I prefer to make the distinction and my preference is based, in part, on discussions with people outside of science fiction.

These people tend to make a sharp distinction between "artificial men" (androids) of whom they approve as part and parcel of "gothic" literature; and "mechanical men" (robots) of whom they don't approve.

I find myself disliking androids, so I must be in favor of robots, where you can at least have an indicator light up when a gear slips.

AS I said before, robots stayed off the screen for quite some time because of *Metropolis*, but they multiplied in print. And gradually they lost some of the human shape which had been a hangover from golem and *Frankenstein* days. Some robots were angular merely because that was easier to build and also enabled everybody to tell a robot from a person at a glance.

But it was then realized that the human shape is only highly versatile and not always the most efficient. Neither a robot switchboard operator nor a robot bartender needs legs to walk around, but both could do with a few extra sets of arms and hands. (In reality, of course, the whole mechanism would be internal, not

even resembling human arms and hands.)

The non-anthropoid robot took a long time coming to the screen. If I am not mistaken, the two robots Gog and Magog in Ivan Tors' *Gog* were the first. They were amusing, too, and even when they ran wild in the end, it wasn't their fault; somebody had tampered with the main computer which issued orders to them.

Of course the most charming of all robots is still in everybody's memory; namely, Robbie in *Forbidden Planet*. Being an all-purpose robot, Robbie has the general shape of a human. He can drive, make coffee, produce bourbon, carry tools and construction materials, and could even shoot it out with an enemy if a killable enemy were present.

Naturally there will be more robots in more stories and, in all probability, other robots in other movies.

There are also very real robots appearing in industry in many places and for many purposes.

And while I won't dare to make the negative prophecy that the real industrial robots will never have a human shape, the majority of them will unquestionably look what they really are: cabinets full of electronic gear and programming tapes.

— WILLY LEY