

The Enigmas from GENERATOR

N. Shpakovsky & E. Novitskaya,
triztrainer@nm.ru,
<http://gnrtr.com>

Why is solving various enigmas a good way to study TRIZ?

The thing is that TRIZ generalizes the massive experience gained by the previous generations of inventors and ordinary people who solved their everyday problems. Sometimes they did that in a very talented way, sometimes their solutions were strokes of genius. Our ancestors used to solve problems without giving a great deal of thought to methods and process of producing new ideas. They were primarily interested in the results.

Solutions to those problems have been preserved in the form of ordinary things around us but almost each of them embodies the idea that allowed an ancient master to solve the problem he faced in a light, graceful and elegant way. This work undoubtedly does not stop today, producing more and more examples of inventive thinking. The folk wisdom as the source of deriving efficient ideas is inexhaustible. (See the TRIZ Journal, May and June, 2001, for Phan Dung's articles on using Vietnamese folk stories to teach TRIZ.) We offer a number of enigmas based on real or fabulous situations. These situations were once successfully solved by heroes who faced them. Try to solve these enigmas and send your answers to triztrainer@nm.ru. Answers and explanations will be published in the September 2003 issue of the TRIZ Journal.

About Dobrynya's feat (from a Russian folk tale)

A great Russian folk tale hero Dobrynya went to bathe in the Puchai River. The place where he was going to bathe seemed absolutely safe to him and the river looked soothing. Dobrynya took off his clothes, left his arms on his war-horse and began to bathe.

And suddenly!... the sky darkened, a whirlwind started and a three-headed fire-drake appeared. The horse started pawing and neighing, then it rose on its hind legs, snapped the bridle and dashed off. And only Dobrynya's Grecian hat remained lying on the sand.

What did Dobrynya do?

About key and baby

A young Englishwoman was about to go somewhere in a car: her child was in place, the cosmetics bag was in her handbag, and the car was waiting in the yard. Wait a minute, but where is the car electronic key? She saw it disappearing in the mouth of her one-year-old son!

She could call the ambulance or just wait till the key returned naturally. But the mother got scared and decided to take the child to hospital herself. She made attempts to open the door, to break the lock and even to break the door but she lost her time.

What was to be done? How did she open the car and take the baby to hospital?

About a space pen

The main purpose of the first space flights was to prove that they were possible in principle. Each flight was a great event. But as space flights became more and more routine, astronauts started thinking about minor problems. One of them was how to make notes in space.

A piston-type fountain pen that was popular at that time wrote well on the earth, because in a fountain pen, ink is supplied to its point by the gravity force. It is not easy to write on a wall with such a pen, and quite impossible to do this on a ceiling. The same problem occurs under zero gravity. American scientists began research. Considerable means were spent to find the idea of a space pen. A miniature pump was switched on as soon as the pen pressed on the paper. Now the fountain pen could write anywhere - in space or on a ceiling, but the cost of one pen, taking into account the means spent on the research, was fantastic.

Several such pens were in space, one of them was given as a souvenir to the then US President. And finally, the designers asked the intelligence service to find out what Russian cosmonauts wrote with in space?

What was the answer like?

(Editor's note: When I heard this story, it was a ball point pen. The expensive solution was a pressurized capsule to push the ink to the ball. The "psychological inertia" that made the ball point pen necessary was the rule in many universities and industrial laboratories that all scientific data must be recorded in ink on carbon paper duplicate forms. This rule would be unnecessary in space, but was deeply ingrained in all the scientists.)

About Palanquin bearers (Korean folk tale).

There was once an old man. He hired two bearers to carry him in a palanquin wherever he would like and promised to pay a salary. It so happened that the old man lost his dog. He called the palanquin bearers and said:

"My dog is missing. Go and look for it!"

The bearers answered:

"We have bargained to carry you in a palanquin and not to look for dogs!"

What did the old man answer that made the palanquin bearers run very quickly to look for the dog?

About closed eyes (Indian folktales)

Once the Emperor's fool Tenali Raman entered the throne room of the palace. At that moment, the Emperor and his advisors were enjoying the amazing handiness of a visiting magician.

"Nobody can compete with me in my profession," said the magician arrogantly after the performance. "I can bet you a thousand gold coins that I have no equal here."

"If you wish I can do with my eye closed what you will never do with open eyes," proposed Tenali Raman loudly. "If you win the competition, you will get a thousand gold coins. If you lose, the money will be mine."

"You, shorty!" cried the infuriated magician. "All right, show us what you can do with your eyes closed that I cannot do with open eyes." And he curled his moustache with a haughty smile.

What did Tenali Raman do?

About letter (Iranian funny story)

Once Dakho was in Teheran and wanted to send a message to his fellow-countrymen to Kazvin. He went to the post office, found a scribe and began dictating a letter. At the end of the letter Dakho named everyone to whom he was sending his best greetings. Having reached the name of Kalbe Husain, he cried loudly:

'Present best regards to Kalbe Husain too!'

The scribe gave a start of surprise and dropped the pen,

'Why crying! I am not deaf...'

What was Dakho's answer?

Conclusion: Working on these problems will help you master TRIZ. The solutions and explanations will be published next month.