



Q: Chinese origins of mathematical game (No Answer, [6 Comments](#))

Question

Subject: **Chinese origins of mathematical game**

Category: [Science > Social Sciences](#)

Asked by: **gabn1-ga**

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I am looking for someone who can either confirm or deny first-hand the following claim:

" In China there exists a game called 'tsyan-shidzi', which means 'choosing stones'. The game is for two players, and it goes as follows: There are two piles of stones of arbitrary size. On each turn, a player either removes from one pile an arbitrary number of stones, or removes from both piles the same number of stones. The player who takes the last stone wins. "

The above claim is often made in connection with Wythoff's game. Wythoff invented his game in 1907, and it is essentially the game described above.

When people describe Wythoff's game and its mathematical analysis, they often remark that the game already existed in China under the name of 'tsyan-shidzi', as mentioned above. The claim is made, for example, by Martin Gardner in "Penrose Tiles to Trapdoor Ciphers" (Freeman, 1989), in the chapter on Wythoff's Nim. It is also made by Yaglom and Yaglom, in "Challenging Mathematical Problems with Elementary Solutions, Vol 2" (Holden-Day, 1967), (page 20, I think). I am not sure what is the original source for the claim.

My academic advisor, however, has some reservations on this. He has asked several Chinese people, and no one could even confirm that 'tsyan-shidzi' belongs to the Chinese language! Sometimes stories about faraway lands pop up on their own...

Therefore, I was wondering whether someone could confirm first-hand whether 'tsyan-shidzi' (or something similar) means "choosing stones" in Chinese, and whether the above game existed in China, maybe as some sort of a childish game or something like that.

Thanks in advance.

Request for Question Clarification by [mathtalk-ga](#) on 23 Jul 2004 21:08 PDT

Hi, gabn1-ga:

I have spoken with a friend from mainland China, a PhD mathematician who is very interested in recreational mathematics and also a strong Go (Weichi) tournament player. He too doesn't believe there is any game like Nim widely known in China; he says his own introduction to Nim was reading Knuth.

There seem to be two independent sources of a Chinese attribution for the game, one from an American writer Bouton, generally credited with having published the first analysis of Nim and with giving it that name:

<http://citeseer.ist.psu.edu/context/193881/0>

It is reported that he later retracted his published claim (circa 1902) that Nim was similar to a Chinese game Fan-Tan.

More recently than that, but earlier than the sources you cited, I've

located a source for the specific "tsyan-shidzi" term. I'm having a "go" (pun intended) at tracking down a physical copy of this work to see if it sheds any light on the claim.

My thought is to post a note from my Chinese friend about this passage, and to provide you with as much information as can be obtained from that work.

As the terms Go (Japanese) and Weichi (Chinese) illustrate, there can be quite different traditional names for unmistakably the same game. However my friends lack of awareness of a game like Nim in China is (for me) pretty telling.

On the other hand, despite growing up in a major city of the Szechuan province of China, he'd never heard of hot and sour soup before coming to America. Just shows that travel can broaden ones perspectives!

regards, mathtalk-ga

Clarification of Question by gabn1-ga on 27 Jul 2004 11:18 PDT

OK, so tell me what comes out of your inquiries.

gabn1

Request for Question Clarification by [mathtalk-ga](#) on 27 Jul 2004 20:33 PDT

Well, my request to my Chinese friend was answered this way:

I can translate the strange spelling of the Chinese TSYANSHIDZI; it means "pick stones". However it doesn't reflect any game that I played in Childhood.

On the other hand, many interesting Chinese games have originated from Tibet (rumor has it that Go originated from Tibet, too). There may be some version of it that existed in Tibet or Mongolia or something.

I can be 99.99% sure if you ask an ordinary Chinese person, s/he will not know what this game is about.

My request to Russian colleagues for an original of this translated work:

Domoryad, A.P. Mathematical Games and Pastimes
(Elmsford, NY: Pergamon Press, 1963)

has not yet met with success.

regards, mathtalk-ga

Clarification of Question by gabn1-ga on 28 Jul 2004 07:19 PDT

So "tsyanshidzi" does mean something like "choosing stones", after all. That gives more credibility to the claim, I think. Of course, the fact that most Chinese people haven't heard about this game doesn't mean that the claim is necessarily false. The game might have existed some isolated rural area, or something.

Can you ask your friend what he meant by "strange spelling"? What would be the standard way of spelling it? Excuse my ignorance of Chinese.

I got the English version of that Russian title from my library. It refers to the game as:

the Chinese national game tsyanshidzi ("picking stones").

It gives two references to the game. Interestingly, one of them is apparently the Russian original of the title by Yaglom and Yaglom that I mentioned previously. So apparently Yaglom and Yaglom is an earlier reference than Domoryad.

The second reference given is:

Uspenskii, Y. (1924) "Selected Mathematical Pastimes", pp. 43--52.

which is also probably a Russian title. I don't know if there is any reference to tsyan-shidzi there, though.

Tell me what else you find. Could you check out that title by Uspenskii?

Thanks,
gabnl

Answer

There is no answer at this time.

Comments

Subject: **Re: Chinese origins of mathematical game**

From: [mathtalk-ga](#) on 28 Jul 2004 14:13 PDT

Authors Akiva and Isaak Yaglom are twin Russian brothers who wrote a number of books. Their 1954 book originally titled "Neelementarnye zadachi v elementarnom islozhenii" would more literally be translated "Nonelementary Problems in an Elementary Exposition". The surname Yaglom may also be transliterated IAglom.

Still looking for the Y. Uspenskii book...

regards, mathtalk-ga

Subject: **Re: Chinese origins of mathematical game**

From: [gabnl-ga](#) on 03 Aug 2004 05:23 PDT

Could you ask your Chinese friend what he meant by "tsyan-shidzi" being a strange spelling? What would be the standard way of spelling it?

gabnl

Subject: **Re: Chinese origins of mathematical game**

From: [mathtalk-ga](#) on 04 Aug 2004 14:29 PDT

Yes, I will do that. Probably there's a way to insert the Chinese characters as Unicode here!

-- mathtalk-ga

Subject: **Re: Chinese origins of mathematical game**

From: [gabnl-ga](#) on 05 Aug 2004 03:24 PDT

I think there was a misunderstanding. I don't need the Chinese characters.

I thought that your friend said that the *transliteration* from Chinese to English was strange. So I was asking about the correct way to transliterate the name. But apparently that's not what your friend meant.

You can post here the Unicode codes of the Chinese characters if you want, but I don't do anything with them.

gabnl

Subject: **Re: Chinese origins of mathematical game**

From: [mathtalk-ga](#) on 08 Aug 2004 05:59 PDT

Hi, gabnl-ga:

Here's my friend's reply:

The proper translation would be Jian Shi Zi, and the Chinese characters are:

???

regards, mathtalk-ga

P.S. To see the Chinese characters, I had to install support from Windows XP for a Chinese font. I found the easiest way to "force" this installation was from Internet Explorer, which offered the menu option:

View --> Encoding --> More --> Chinese Traditional

I then had to dig out an XP Pro install disk for at least one file and reboot afterwards, but now I can "see" the Chinese in characters in IE, Outlook Express, and Mozilla Firefox.

Subject: **Re: Chinese origins of mathematical game**

From: **gabn1-ga** on 09 Aug 2004 02:59 PDT

Cool! I can see the characters (at least from this computer). They are characters number 6F6F, 5752, and 8D7D in the following table:

<http://www.unicode.org/charts/PDF/U4E00.pdf>

Thanks,
gabn1

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