

15 Geodesics
between
Martin Gardner
and
Buckminster Fuller
(and Me)

.....

JoHN MiLLeR
Portland Oregon

WEB: dialectrix.com/G4G



How many of you have attended a FULLER “talk” ?

Cool. (turned out to be just a couple people!)

Rest assured,

I’ll show this web link on several slides.

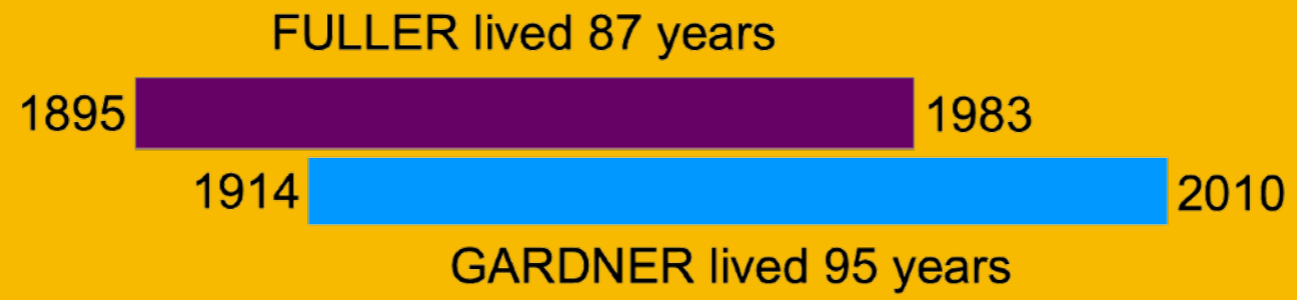


OKAY ... Bucky and Martin ... Doing some Tricks.

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Bucky's photo: Wernher Krutein, phtovault.com
Martin's photo: Adam Fish, www.fishfotography.com

Life Times



Their 2 lives were offset by about 2 decades with Fuller born in 1895.



**Richard Buckminster Fuller ("Bucky")
1910**



**Martin Gardner
1932**

High School portraits, 22 years apart.

Ensign ... Lieutenant U.S.N



Yeoman

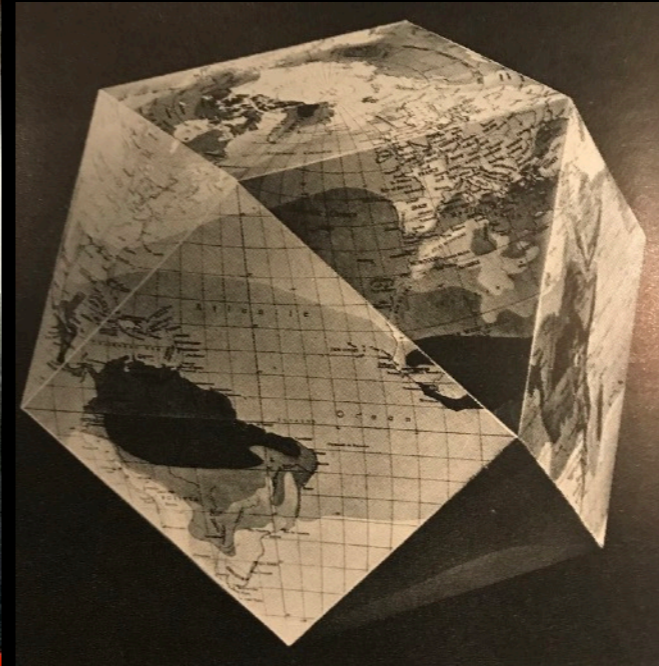


Both served in the Navy -

Bucky in the First World War,

Martin in World War II, ending in 1945.

1943



CUBe OCT A HEDRON

In 1943, Gerard Piel, science editor of LIFE, saw Fuller's Dymaxion globe. He had a cartographer draw an unfolded "NET".

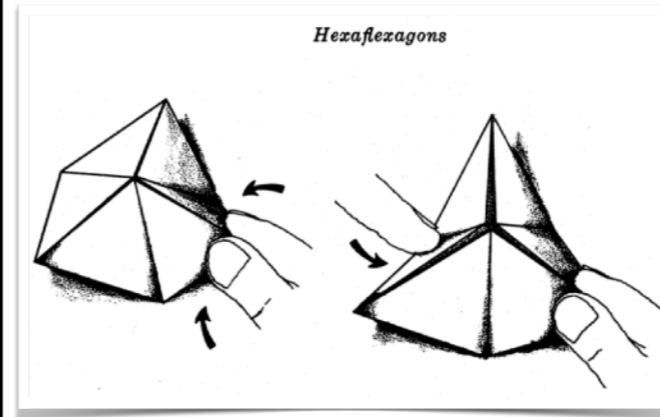
Piel then put a card stock insert in *this* issue of *LIFE*.

It consisted of SIX square faces and EIGHT equilateral triangles.

These 'globes' popped up in offices all over.



1956



HEXAFLEXAGONS

In 1956, Martin sold his Hexaflexagons article

to *Scientific American*,

Which caused a lot of flexing in offices all over.

GERARD (Jerry) PIEL

1915-2004

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Recall that Jerry Piel was instrumental in publishing Fuller's map in 1943.

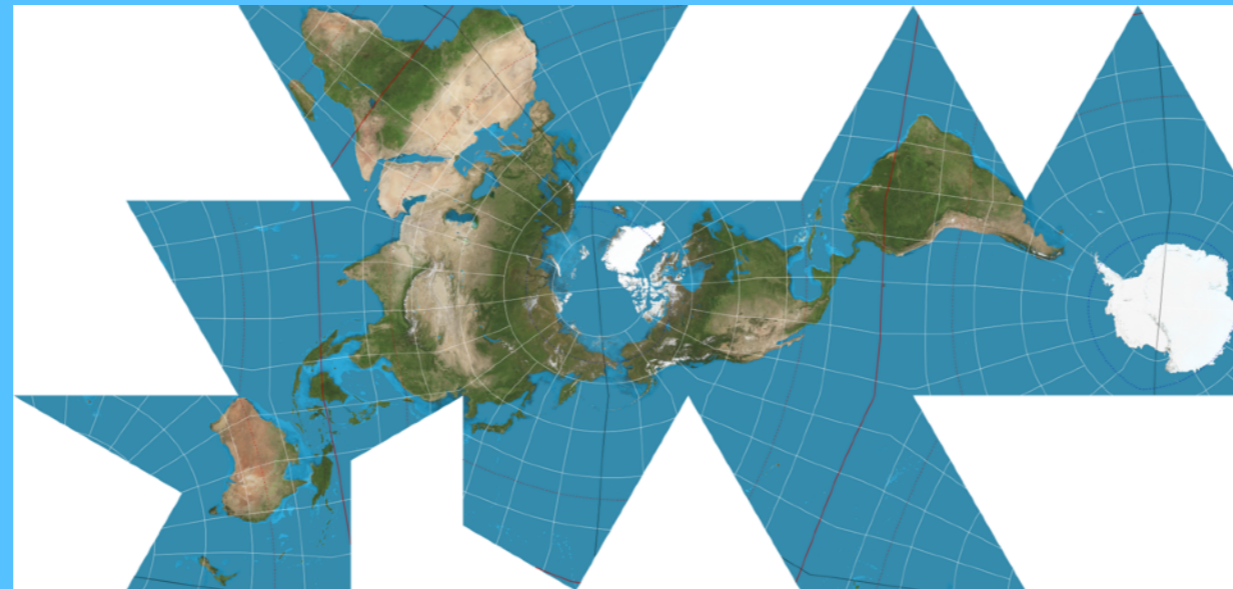
In 1948, Piel became the Editor & publisher of the *revived* Scientific American magazine.

The popularity of the 1956 Flexagon article prompted Piel to ask Gardner to write a monthly column.

(On this slide, the presentation became Paused and audience was Chattering at me, etc. Great confusion till the tech came up and hit the Play button. We'll see if that is edited out in post production.)

1954

Airocean World Map



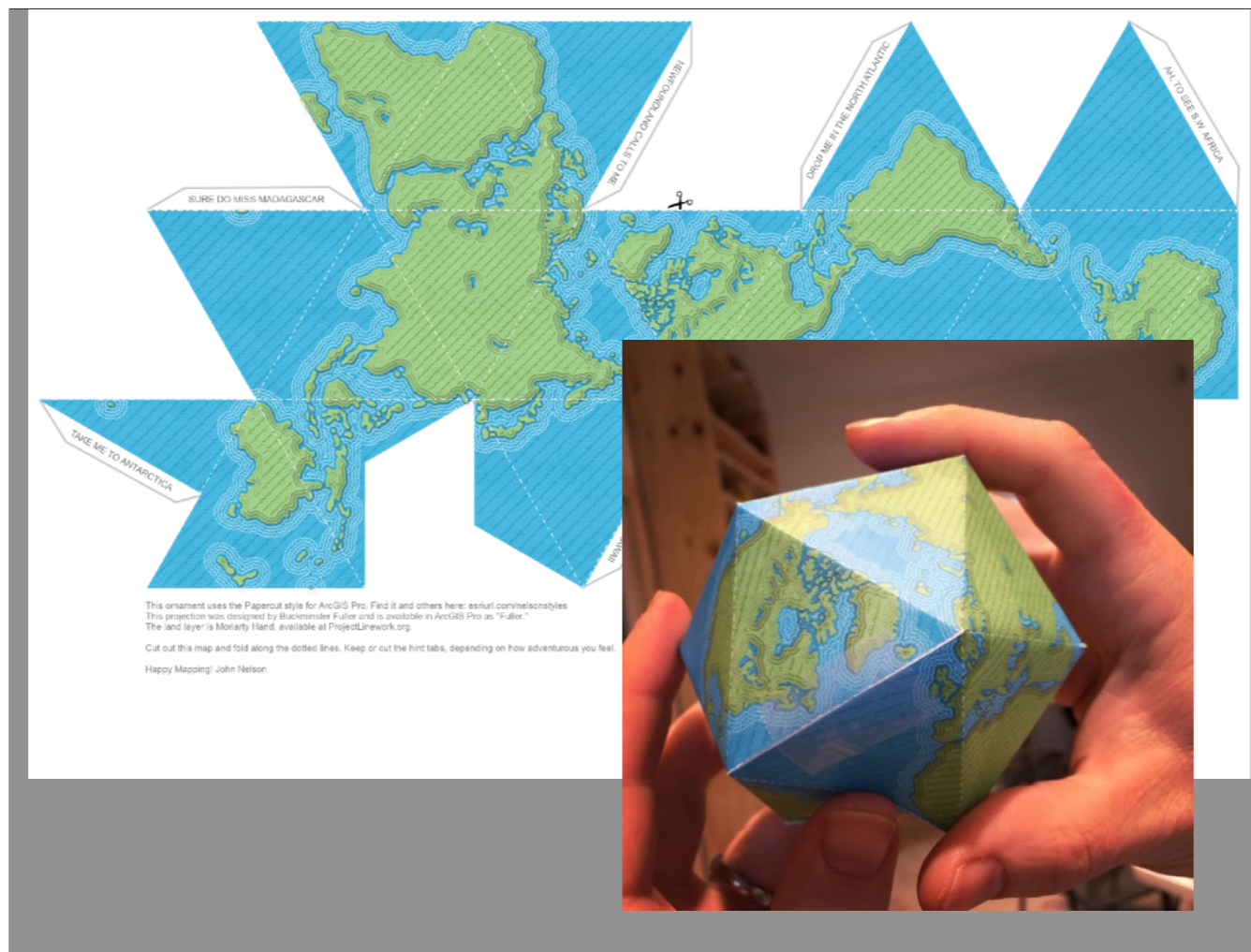
Cartographer Shoji Sadao

@Fuller: Dymaxion Skyocean Projection World Map

Back up 2 years to 1954 -
Fuller and cartographer Shoji Sadao produced the

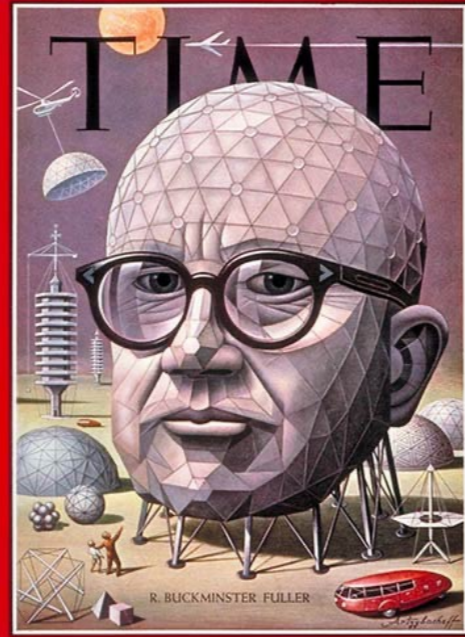
Air Ocean World Map,

using all triangles - making an Icosahedron.

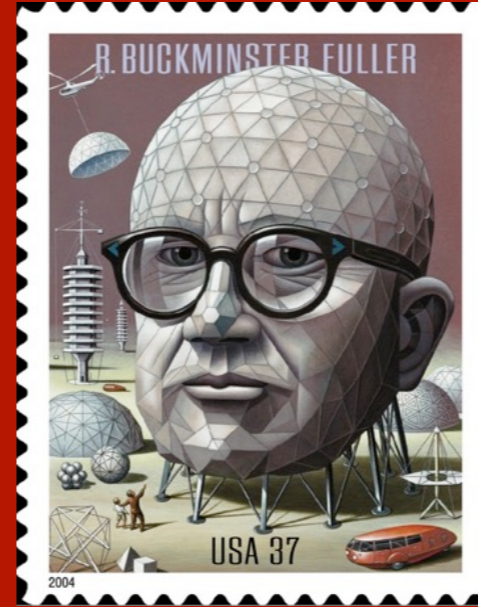


This is my Gift Exchange item. I have a few extras.

Boris Artzybasheff (1899-1965)



1964



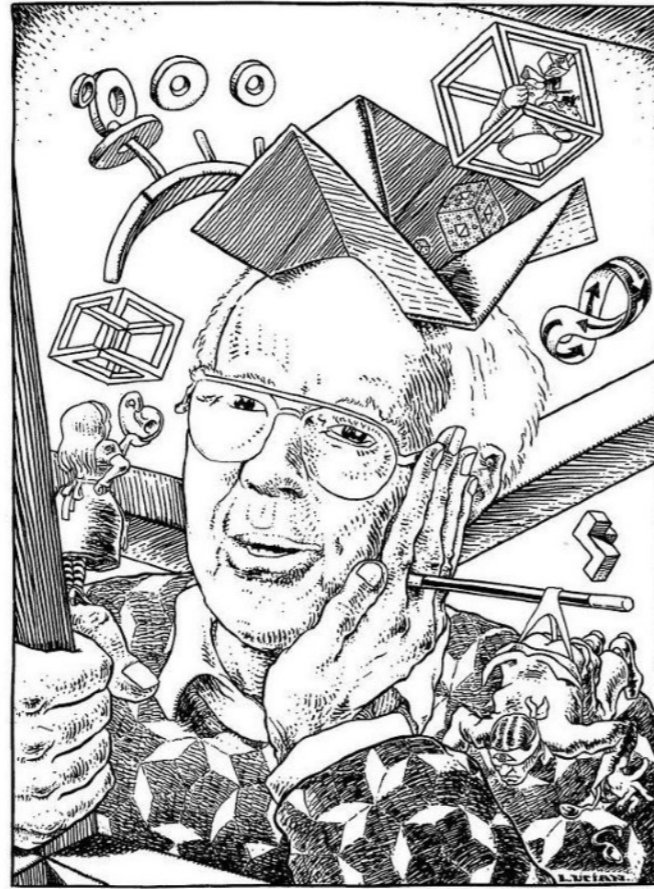
2004

Bucky's likeness appeared on a 1964 TIME cover.

That artwork re-appeared on a stamp in 2004,
marking the 50th anniversary
of Fuller's patent on the Geodesic Dome.

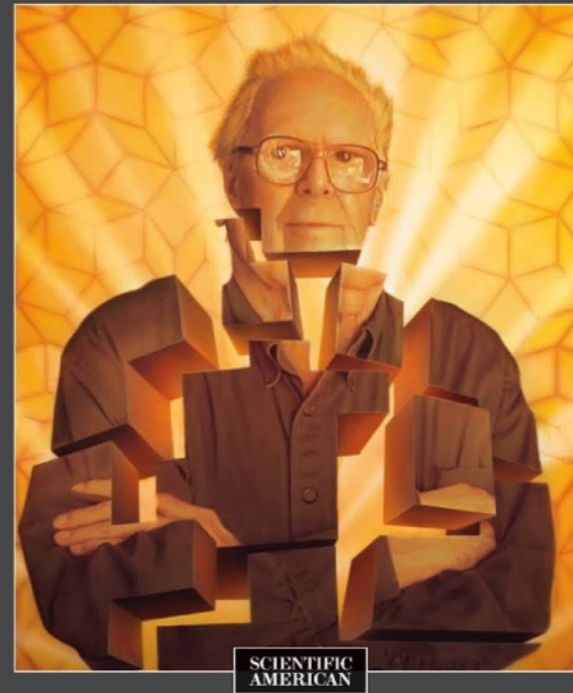
The stamp was issued on Fuller's (109th) birthday.

Lucian McLennan



Tim O'Brien

MARTIN GARDNER
The Magic and Mystery of Numbers



Here are similar portrayals of Martin.

DEPARTMENT OF ARCHITECTURE
UNIVERSITY OF BRISTOL

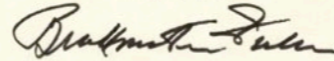
11th June, 1965

Dear Mr. Hunt,

I have been through the piece I sent you on 9th and find that there are one or two corrections, the most important of which is the deletion of the word "more" on page 7, which I should be glad if you would make to the copies I have already sent to you.

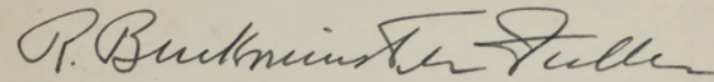
With good wishes,

Faithfully yours,



Buckminster Fuller

Mr. John Hunt,
The Saturday Evening Post,
The Curtis Publishing Company,
641 Lexington Avenue,
New York, N.Y.
U.S.A.



Here's a typewritten letter Fuller wrote to *The Saturday Evening Post*

3 Aug 99

dear John:

MARTIN GARDNER

3001 Chestnut Road
Hendersonville,
N.C. 28792
(828) 693-3810

My new address is as above. The phone number is also my
fax. If ^{I'm} not here to pick up phone, it accepts after the sixth
ring.

Of course it's OK to post anything of mine on the www.
Thanks for keeping me up to date on Langford's problem

all best,

Martin

Martin Gardner

Here's a reply Martin wrote to Me in 1999, regarding an index I had made of all his columns.

Martin says: "Of course it's OK to post anything of mine on the WWW" !

--

(I added his full signature to the slide.)



Dymaxion Chronofile

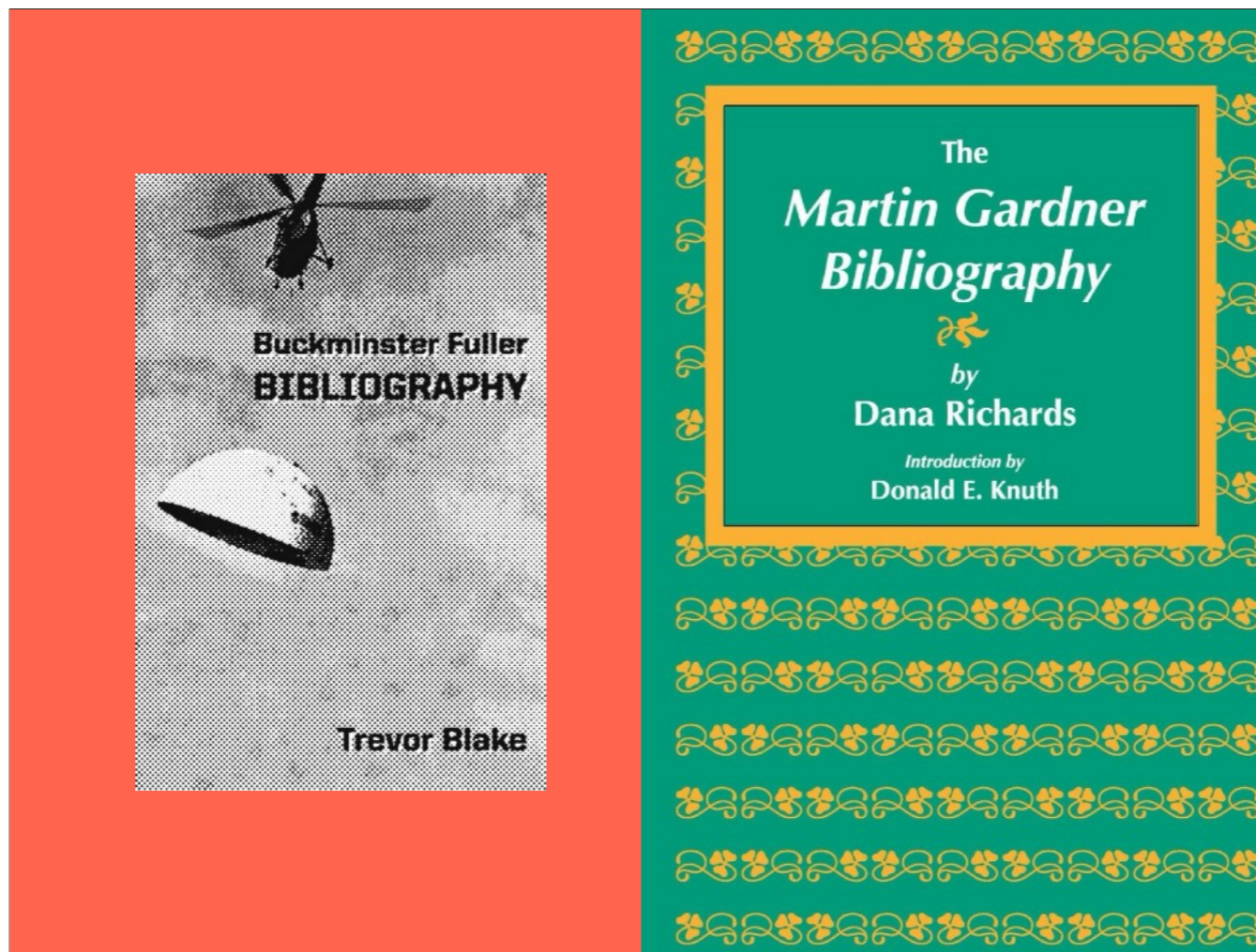
MG - Index Cards



Here is Fuller's Dymaxion Chronofile.

(Fuller took notes every 15 minutes of his life.)

Martin kept Index Cards in Shoe Boxes and graduated to metal.



Each fellow had extensive bibliographies published by others. Dana is here.

Trevor Blake lives in Portland!

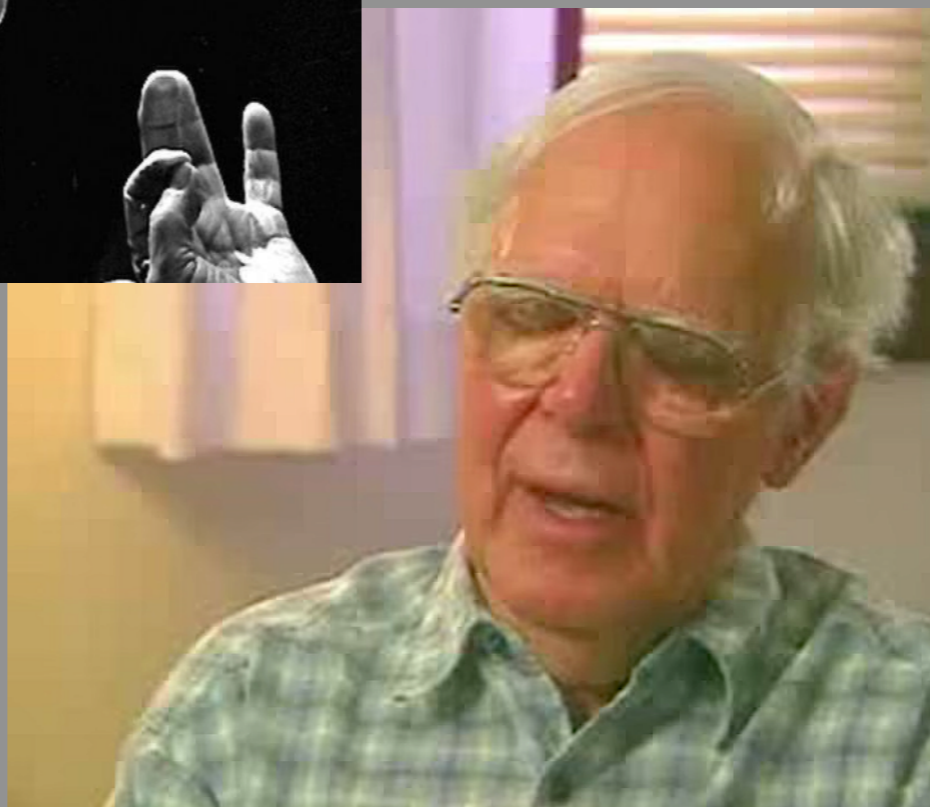


The Nature of Things

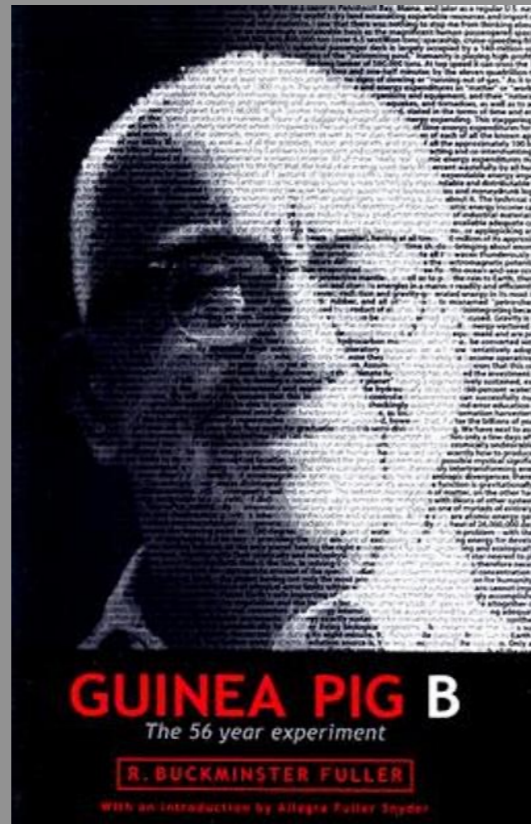
**Martin Gardner
with David Suzuki
1995**

American Masters

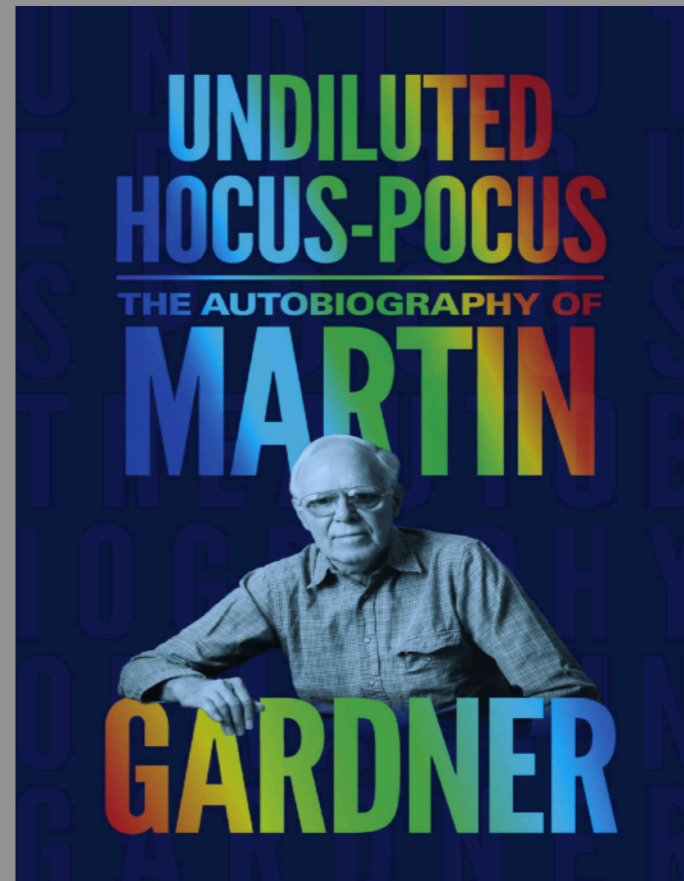
**Buckminster Fuller:
Thinking out Loud
1996**



Both men were subjects of documentaries, just a year apart.



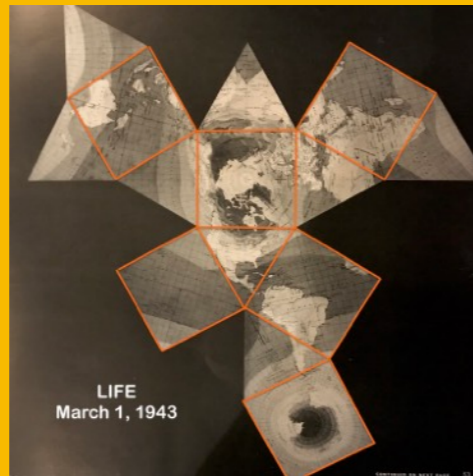
“B” for Bucky



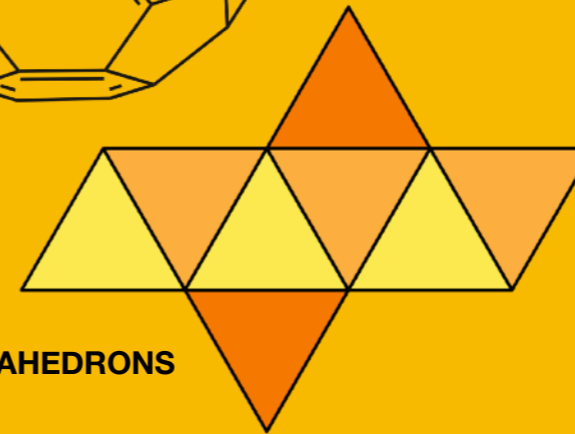
Both had autobiographies, of sorts.

Martin wrote about a couple Bucky topics

The DYMAXION MAP



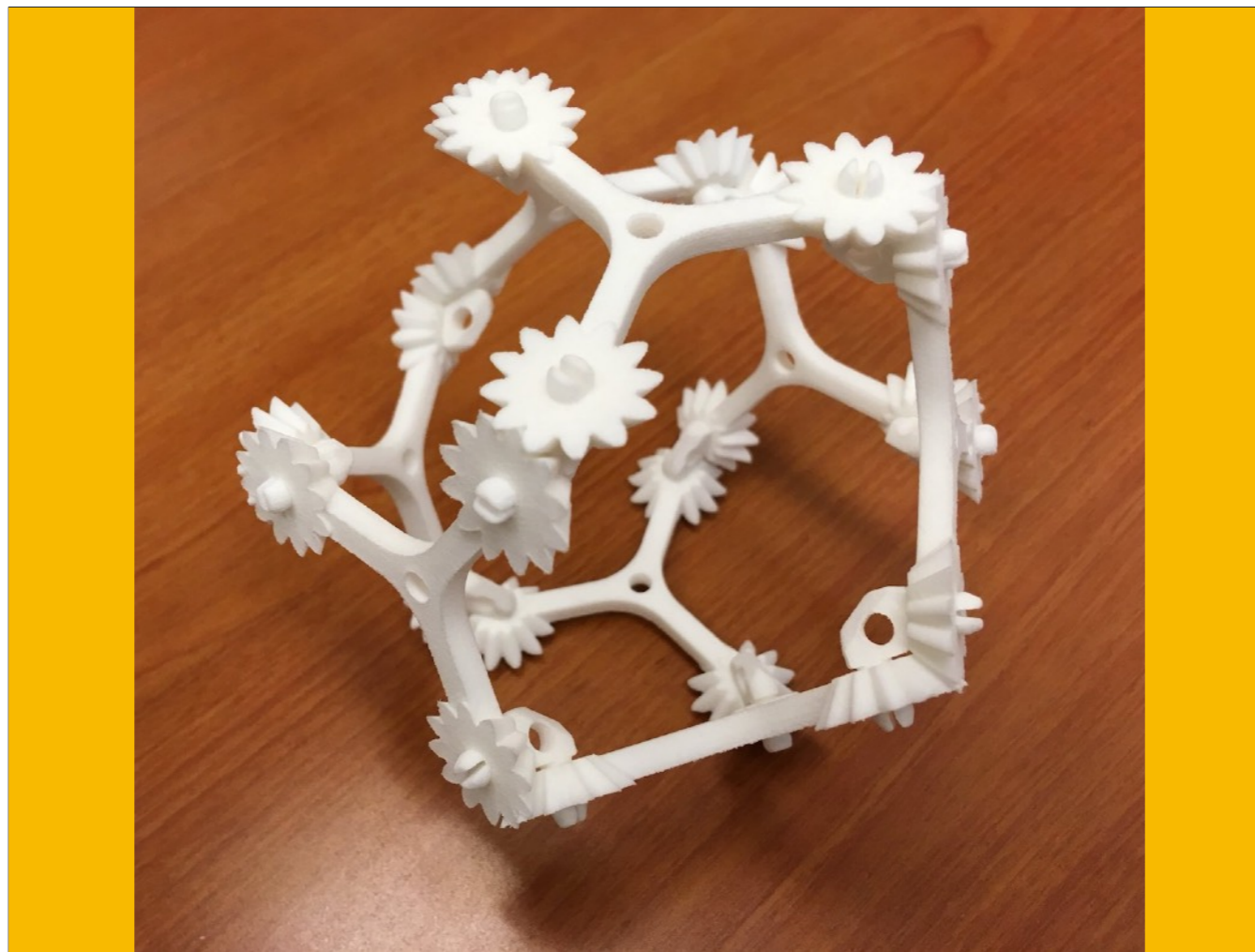
BUCKYBALLS & BUCKMINSTERFULLERINE



TETRAHEDRONS AND OCTAHEDRONS

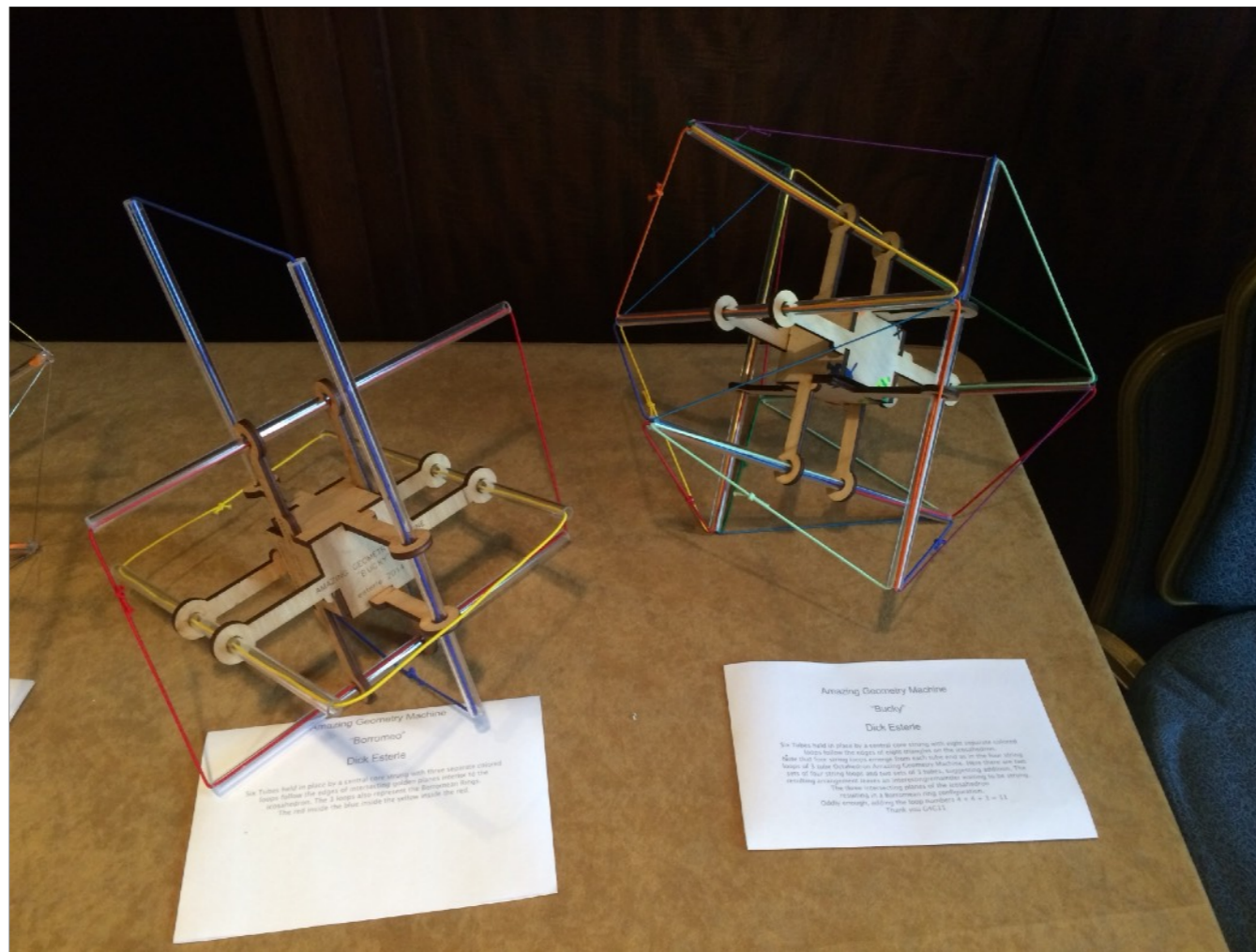
OK...Gardner wrote about several Fuller topics.

So.. Let's look at some things by G4G folks...



Henry 3D-printed this “jitterbug” mechanism.

Fuller’s had rubber joints.



Cute little Tensegrities by Dick Esterle.



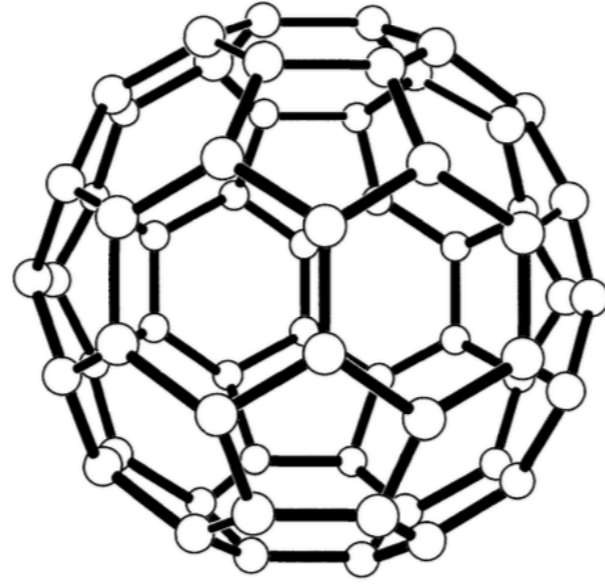
George Hart under a Zome structure appropriately at a Bridges conference.



Paul Hildebrant of ZomeTool, is talking with my son August. (At BUCK head.)



That's me, with Gus's little boy! (Last month)



C 60 The "buckyball" molecule—the world's smallest soccerball.

Martin mentioned C 60 - a Carbon molecule!



Tila Buckyballs

Very hollow beaded beads
by Gwen Fisher
www.beadinfinitum.com



This tutorial will show you how to weave beautifully spherical buckyballs with two-holed Tila beads (or half Tilas), bugles and seed beads. The design is based upon the structure of a soccer ball. When made with shiny metallic beads, it has lots of facets that reflect light like a disco ball. The beaded bead is remarkably hollow with lots of large holes that let you see inside.

Bonus Projects Earrings in 2 Sizes!



Materials

Tila or Half Tila Beads (60 beads)
Size 11° seed beads (30 beads) A
Size 15° seed beads (60 beads) B

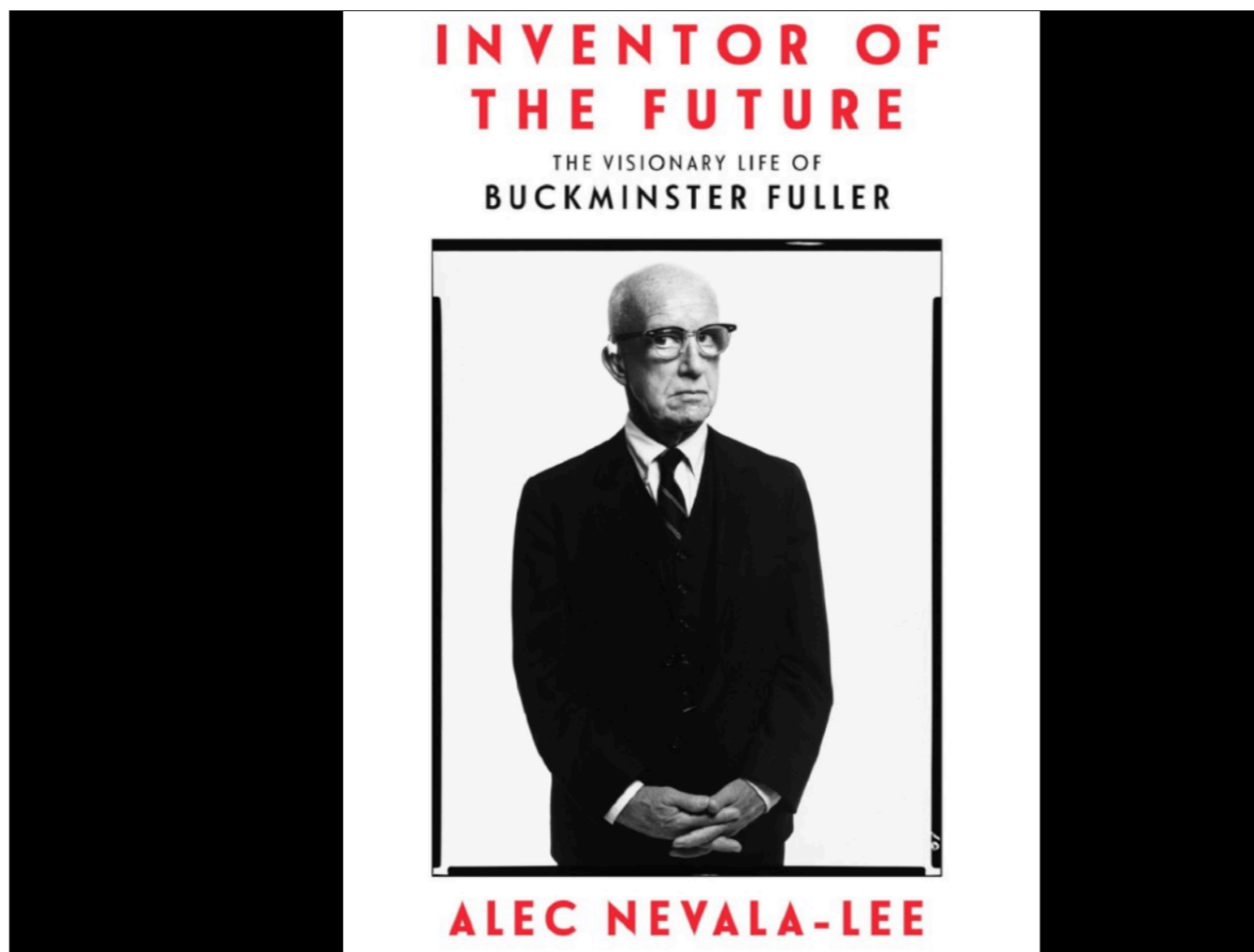
This tutorial is suitable for intermediate bead weavers who know have already beaded a dodecahedron of some sort. This

Gwen Fisher has a tutorial for beading Buckyballs!



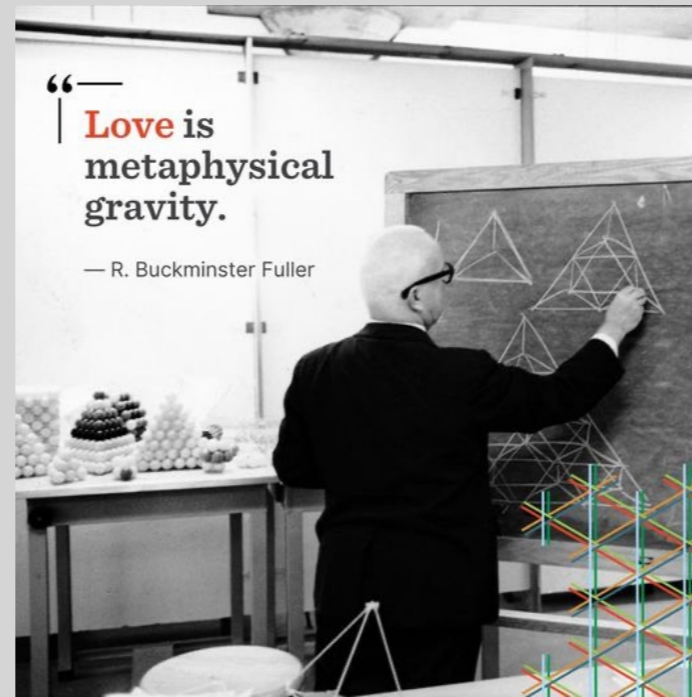
On top, is a Google Doodle for the 25th anniversary of the BuckyBall - in 2010.

Also in 2010, The Gathering tried to get one for Martin. No dice.



This recent book dispels many Bucky Myths.

It has Extensive notes and Index.



Bucky's writing was dense and obscure.

Martin's writing was clear and simple.

Fuller often took credit for other people's ideas.

Martin relished giving credit to others.

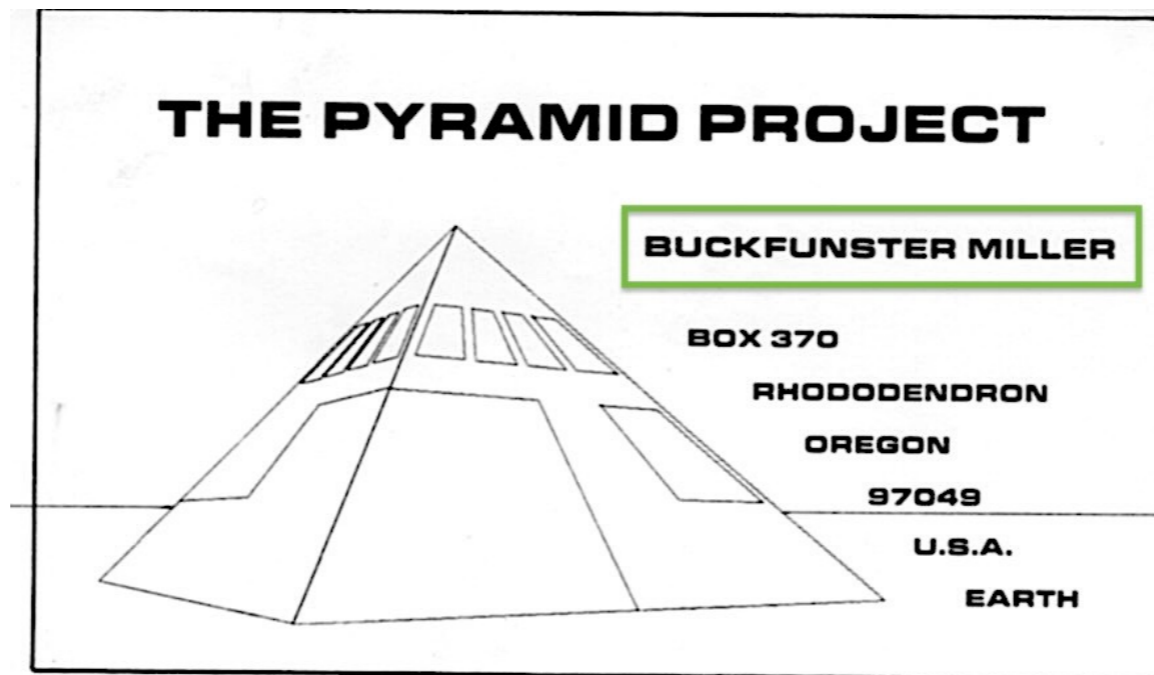
Uriah Fuller

pseudonym used by Martin Gardner
in his
Confessions of a Psychic
series.

Here's a good one!

Martin's "Uriah *FULLER*" was a pun on Uri Geller..

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Speaking of Puns —

I myself used BUCK..**FUN**..STER .. **MILL** ER ... in the 1970's,

in connection with my pyramid house designs.

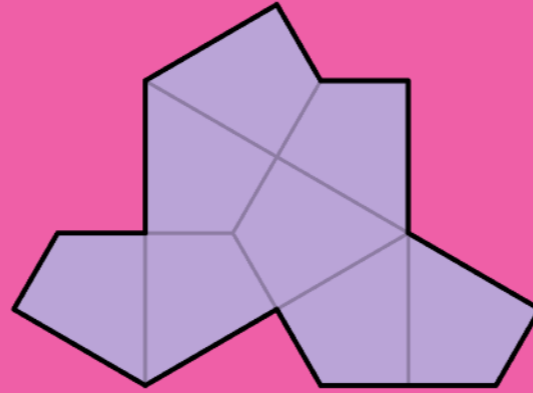
fin?

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(I checked the timer, and went ahead with three more slides)

ChatGPT:

How would Buckminster Fuller Describe the Aperiodic Monotile?



I asked ChatGPT How Bucky might describe the Aperiodic Monotile...

I put its poetic answer on the web.

Martin Gardner & Buckminster Fuller *similarities according to ChatGPT*

Martin Gardner and Buckminster Fuller were both influential figures in their respective fields, although their areas of focus and contributions differed significantly. However, there are a few similarities between the two:

Interdisciplinary Approach: Both Gardner and Fuller had interdisciplinary interests and explored a wide range of topics beyond their primary fields. Gardner, known for his writings on mathematics, also delved into magic, puzzles, skepticism, and literature. Fuller, an architect and inventor, had interests spanning architecture, design, engineering, philosophy, and sustainability.

Popularizers of Ideas: Both Gardner and Fuller played significant roles in popularizing complex ideas and making them accessible to a broader audience. Gardner's books and articles on mathematics and recreational puzzles made abstract concepts engaging and understandable to the general public. Similarly, Fuller's books, lectures, and designs brought his innovative concepts about geodesic domes, sustainability, and synergetics to a wider audience.

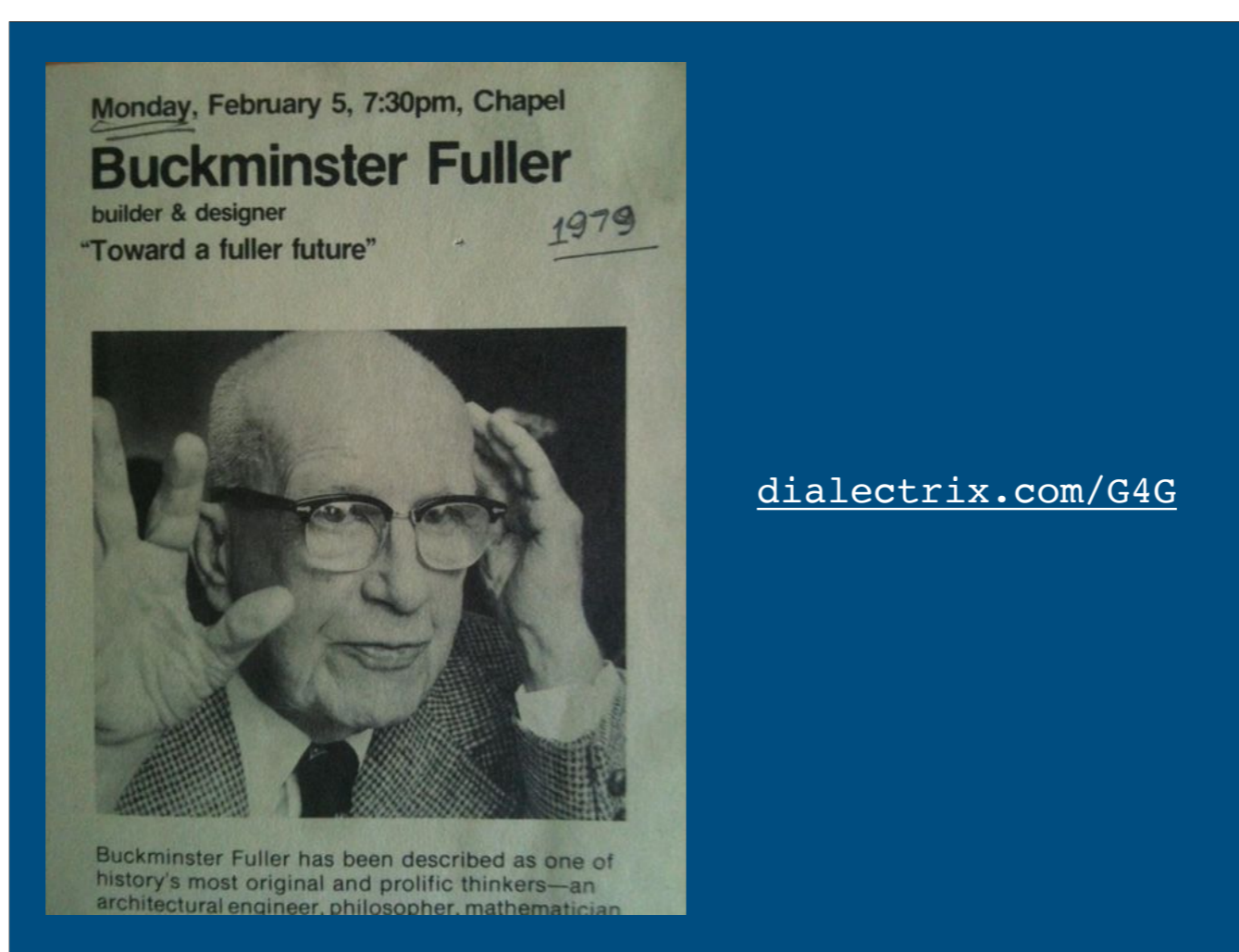
Creative Thinkers: Both Gardner and Fuller were known for their creative thinking and innovative approaches to problem-solving. Gardner's puzzles and recreational mathematics often required unconventional thinking and creative solutions, while Fuller's designs and inventions were characterized by their novel approaches to architecture and engineering challenges.

Influence on Education: Both Gardner and Fuller had a significant impact on education. Gardner's books and articles, particularly those focused on mathematics and critical thinking, have been used in educational settings to inspire curiosity and promote intellectual exploration. Similarly, Fuller's ideas about comprehensive design, sustainability, and the importance of interdisciplinary thinking have influenced educational approaches in architecture, engineering, and environmental studies.

While Gardner and Fuller had distinct backgrounds and areas of expertise, their shared commitment to intellectual curiosity, interdisciplinary exploration, and the dissemination of knowledge have left a lasting legacy in their respective fields.

I also asked ChatGPT for similarities between Bucky & Martin, and got curious results!

Popularizers of Ideas, and so on.



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In 1979 Fuller gave a talk at Lewis & Clark College.

I hosted his visit.

His talk concluded: "Don't be afraid of Change."

Thank you.