

THE PATRIARCH OF AMATEUR ASTRONOMY

A short biography of John Dobson Compiled by Peggy Walker

John Lowry Dobson has been called the "Pied Piper of Astronomy," the "Star Monk," and the "Mac Guyver of Astronomy." He is arguably one of the most influential personalities in amateur astronomy in the last 50 years. He has almost single-handedly revolutionized backyard astronomy by bringing it out to the street, making it accessible for anyone who has ever looked up in wonder, and asked "Why?" He challenged telescope manufacturers as more and more amateur astronomers were making and enjoying their own larger homemade aperture telescopes. John developed the process of mirror grinding to the point it was an art form that everyone could do. He challenged amateur astronomers to rethink their hobby by actually including the public in the observing experience by going to public places with their telescopes.



John Lowry Dobson
Sep 14, 1915 - Jan 15, 2014



Peking University, Beijing, China

"Someone once asked me, 'Are you an astronomer, or are you a comic?', and I answered, 'This is a funny Universe and I'm not responsible.'"

BACKGROUND

John was born on Sept. 14, 1915, in Peking, China to Robert James Hastings Dobson and Mabel Annetta Nicholson Lowry. Mabel's dad, Hiram Harrison Lowry and his wife Parthenia moved to China after his service in the Civil War. Hiram mustered out of the army in 1863 and got his Doctorate of Divinity from the Methodist Episcopal Church and was sent to China in 1867. When they got to China, Hiram and Parthenia worked in Fuzhou, Fuzhou Shiqu, Fujian, China, from 1867 to 1869 developing the North China Mission in Beijing. Dr. Hiram Lowry in 1914 became the President of the Huiwen University, that was the precursor of Yenching University now known as Peking University. Hiram and Parthenia Lowry raised their family in China during this time of missionary and "imperialist" expansion into China — which



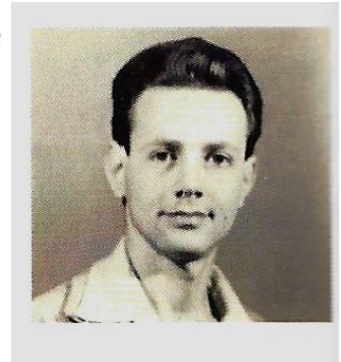
The Dobson family photo John is in back row next to his mother



would later prove to become problematic in the coming years.

Mabel, John's mother was born in Beijing in 1882 grew up during the Boxer Rebellion that was caused by the nationalists who were anti-foreign and anti-Christian. She only stood about five feet tall and when she would play the pipe organ at church, a coolie had to work the feet pedals for her. Mabel was a certified teacher who taught music while his father Robert, a highly educated man taught zoology, physiology and even Latin at the University. Robert Dobson and Mabel Lowry married and raised their family in Beijing, with 6 births and four surviving children; Ernest 1914-1975, John 1915-2014, Parthenia 1917-1917, Robert 1919-1990, Ralph 1920-1920 and Harrison 1923-1985. John's dad, Robert Dobson, was born in 1883 in Grey, Ontario, Canada, who was also part of a missionary family that was sent to China. John's had commented once that both sets of his parents were American missionary families sent to China in the late 1800's.

"In Peking, (Beijing), my brother and I attended the American school. But my parents were not pleased with what was being taught there, so they opened a school at home. They were both teachers and provided me with a thorough educational foundation."



John was interested in astronomy at a young age and John recalled, *"As a child my father had one of those stupid refractors. It was without a mount, so we simply leaned it against something to view through it. I remember when I was in grade school making drawings of Jupiter and its moons on different nights. These pictures were made on dark blue paper, two feet tall and a foot and one-half wide. They were really big pictures."*



**Lowell High School
Hayes and Masonic Street**

With anti-foreign and anti-Christian (anti-imperialist) sentiments still growing, the Dobsons who lived next to the barracks during the war between the Nationalists factions, war lords and the Communists.

The family had to constantly seek shelter in the

furnace room several times a day as the war planes appeared overhead. This civil unrest forced the Dobson family to relocate to San Francisco, California in 1927. Mabel and Robert found a house on 37th Avenue that was right across the Golden Gate Park which is where his mother would teach her sons on occasion when she found the public schools curriculum wanting. Once his family settled in the San Francisco area, his father accepted a teaching position at Lowell High School and taught there from 1927 until he retired in the 1950s. All the Dobson children attended college at the University of California at Berkeley each achieved degrees.

"I attended grade school in San Francisco, and then went to Lowell High School, a college preparatory school where my father taught biology and zoology. In 1934, I attended the University of California at Berkeley and majored in chemistry. In those days we paid only \$54 a year for tuition, but this included two years of mandatory ROTC military training. I first went to the university to study biochemistry with the avowed purpose to keep Einstein alive, so he could continue to figure this whole bloody thing out. Ever since I was a child in Peking I was terribly interested by Einstein and gravity, so I would study the cosmos. But I didn't go straight through the university: after about two years at Berkeley, I became fed up, so I quite school. After a couple of more years I went back, but I quit again after just one semester. I didn't graduate until 1943."

MONASTIC LIFE

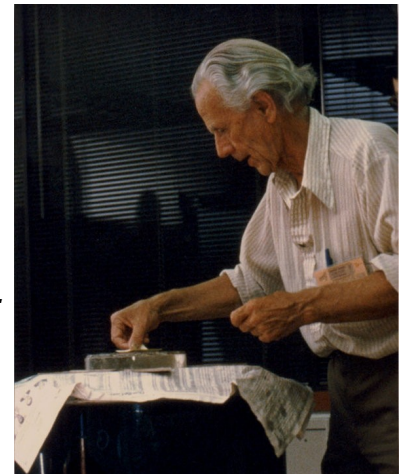
After completing his degree in Chemistry at the University of California at Berkeley in 1943, John worked in a number of defense-related jobs. Right after graduation John was hired at CalTech and worked in the field for a while until he requested the radiation lab.

"At the time I graduated from the university in 1943 we had to choose between a war-related job or a rifle [active duty in the military]. Things were tough, the only holidays we had off was Christmas Day. We got Easter off, but that always fell on a Sunday, and we always got Sundays off. I had to do war-related work at the Rad Lab at Berkeley for about a year and a half, and then in 1944, the Swami allowed me to join the monastery. But I had to get out of the Manhattan Project through a double interview with the FBI. The second man asked me, "Do you think that the best thing you can do for your country at the present time is to join a monastery?" "Yes," I said. He replied,

"You might be surprised, by how many people feel like that."

John said he became a "belligerent" atheist in high school because of what he saw in people who were from traditional religions. When he first heard Swami Ashokanandra speak in February 1937 at the Vedanta Center in San Francisco, he realized that atheism was wrong and that these people were on to something. Soon after he joined the Vedanta Monastery in San Francisco in 1944 he became a monk of the Ramakrishna Order. When he joined this particular order known for its intellectual rigor and public service, he was given the assignment of reconciling the teachings of religion with those of science to develop a Vedantan cosmology. He spent the next 23 years in the monastery dedicated to this end.

"But when that man (Swami Ashokanandra) opened his mouth, I knew I had made a mistake. I had prematurely presumed that the notion of God was a mythological thing. But in listening to Swami, I knew instantly that I had made a mistake. By 1940, I knew I wanted to join the monastery. I went to Swami for instruction, and he sent me back to the university. By the time I entered the Vedanta monastery in 1944, I knew that the universe was primarily made of hydrogen and that the principal energy in the universe was gravitational collapse. Gravity was the force that caused the hydrogen to fall together and that's what made the stars and galaxies, but I wanted to make a telescope to watch it happen."



Having graduated from the university as a chemist, he wanted to see for himself what the Universe looked like, so John built his first telescope in 1956 from recycled optics. It was a two inch refractor that had a coated achromatic lens with a 14 inch focal length with 37 power. John's first home made telescope was simply made from a lens he got in a junk store and an eyepiece from an old pair of Zeiss binoculars. Once completed, when John set it up for "first light" he saw the rings of Saturn.

BIRTH OF AMATEUR TELESCOPE MAKING

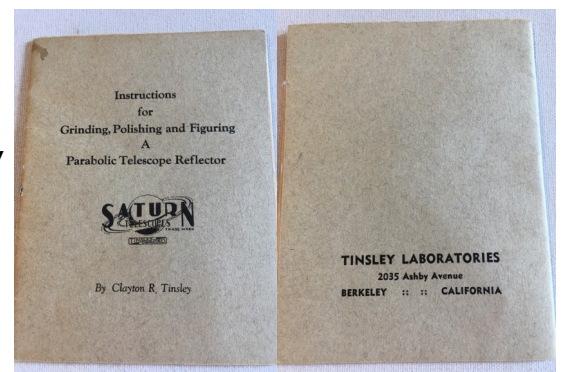
"While I was in the monastery in San Francisco, I became intense about actu-

ally seeing what was out there. I wanted to see it happening. My friend said that I could grind my own glass, and I said, 'You're nuts.' I can't remember the exact dates when we did this, but it was quite a few years after entering the monastery in 1944. We began making our first telescope using twelve inch porthole glass. We ground it against another 12 inch porthole glass that we found in a salvage shop at the foot of Filbert Street in San Francisco. The grinding of the glass required the use of carborundum which could be purchased readily in San Francisco."

"When I first saw the third quarter moon through this twelve inch telescope, I thought, 'My God, it looks like I'm coming in for a landing.' And I thought, 'Lordy, Lordy, everyone has got to see this!' And that is when the idea of public service sidewalk astronomy got into my head. This was about 1956 or 1957."

John was transferred to the Vedanta Monastery in Sacramento in 1958 and started getting seriously involved in telescope making. The first telescope he made at Sacramento was a 5-inch reflector with a ground glass from the bottom a gallon glass jar. It was John's greatest delight to share the beautiful things he saw through the telescopes with others. One of his friends was so amazed by what he saw through the 5-inch telescope, that he told John, "You've got to make something bigger!," and donated some salvaged portholes.

So the portholes were smuggled into the monastery in fertilizer boxes and stored in the gardening shed since John was a gardener and in the shed daily. John screened his own sand for grinding and made his own rouge or grit, out of garden supplies like ferrous sulfate and oxalic acid. Since grinding mirrors is noisy, John ground the glass with the grit in large buckets of water to deaden the sound. Since monks traditionally possess no money to speak of, he had to find a way to mount the mirrors using scrap materials that could be gathered up at no cost. So his telescopes were made from porthole glass, discarded hose reels, lumber core cut-outs from school house doors, and scrap wood. All of this contraband and telescope making had to be done without attracting the attention of the monastery brothers. Many felt that his telescope making and sneaking into the neighborhoods were not an appropriate pursuit for a monk or the best use of his time.



The booklet John used to learn how to grind mirrors

John was asked once where he learned or was taught mirror grinding. He said,

"It came from a small gray booklet from a manufacturer that sold glass and grit. The book was actually from the late 30's I believe. When grinding mirrors, when you start the coarse grinding, it is like a caveman. The smooth grit has you in the suburbs and the fine polishing is like the city."

The "Dobsonian" telescope in reality is simply a Newtonian telescope with a mount John designed for better maneuvering and viewing. They are now called alt-az mounts, which means it moves up and down, (vertical or altitude) and left and right (horizontally or azimuth).

"One time at Crater Lake, we had our telescopes set up at the Rim Village area. A man came up to me and said, 'These look like Dobsonians.' I said, 'Yes, and I'm Dobson.' The man replied as he shook my hand, 'It's not often you get to shake hands with a Newton!'"

John had commented about telescope making by saying, *'It takes a long time to build a Mercedes and it will only get you to the Grand Canyon. You can build a telescope in about a week and it will get you to the Moon. You can build a telescope in about a week.'*

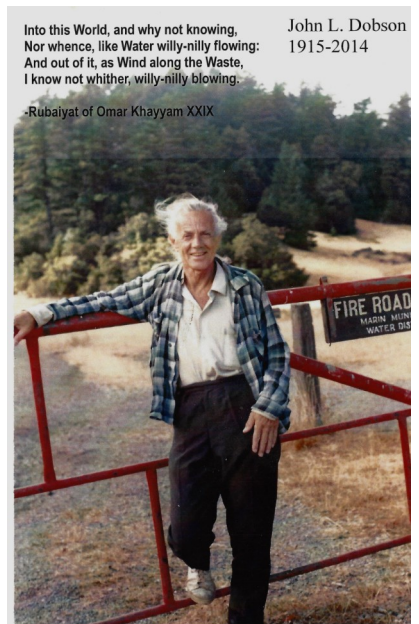
The desire that drove John to make more and larger telescopes put him in constant peril of expulsion by monastic authorities. But it was easily outweighed in John's mind by the opportunity to show people the Universe first-hand. Once his decision was made, John put discarded wagon wheels on his telescopes to make them easy to transport into the residential neighborhoods surrounding the monastery. As more kids and adults were delighted with the views of the night sky requests were made for John to help them make their own telescopes. He realized that this would make his life more difficult because his AWOL hours from the monastery would increase. Nevertheless, John continued to expand his activities which eventually led to John being asked to leave the monastery in the Spring of 1967, after 23 years as a monk. Ironically, the "last straw" event was a mistake, they thought John was absent with his telescope but in fact he was weeding the lawn outside the wall, out of sight. He was not expelled because the monks were against his telescope making, but because it was perceived these activities took time away from his monastic duties.

" I went to the Vedanta monastery in Sacramento in 1958. The idea that others should have the opportunity to see what I could through my telescope is the reason that as soon as I was expelled from the monastery in 1967, we immediately began work to organize the Sidewalk Astronomers in 1968."

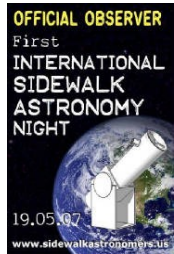
So began John's long commitment to public-service in astronomy.

YOU GET TO DECIDE THE LEGACY YOU LEAVE

On January 15, 2014, John passed away at Saint Joseph's Hospital in Burbank, California at the age of 98 from a brief illness. At the time of his passing John was surrounded by his brothers from the Vedanta Center who prayed over him. Also in attendance were several of his friends from various astronomy communities.



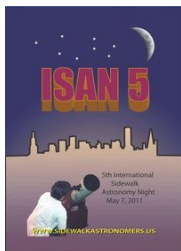
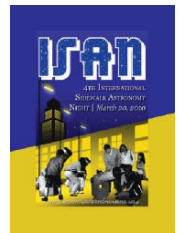
In 2005, the San Francisco Sidewalk Astronomers declared September 14th as John Dobson Day. John's legacy continued in 2007, when a Sidewalk Astronomer



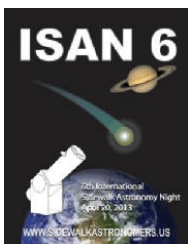
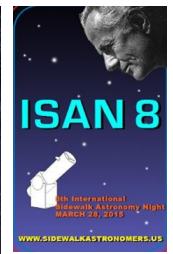
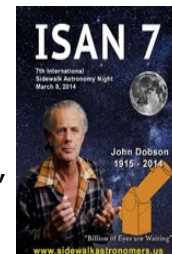
from Chile mentioned to Donna Smith that we should hold an event celebrating John world-wide. So they chose to celebrate John and his vision with a night called International Sidewalk Astronomy Night or ISAN. Usually held in Spring or Fall, all the amateur astronomers who love outreach would be encouraged to take their scopes out to be "where the people are." In particular, amateur astronomers who made their own telescopes were encouraged to show them off in their communities.



The reception was overwhelming and many communities around the world celebrated it in their unique and cultural styles. Some had garlanded elephants in a procession, others had camels carrying scopes out to their star party locations, while many in the cities had large banners and displays and party – like celebrations. The enormity could truly not be quantified as to actual numbers of countries and cities that participated world wide.



When all is said and done, amateur astronomers from all four corners of the globe; Africa, Asia, Argentina, Australia, Austria, Bangladesh, Bolivia, Brazil, Canada, Chile, China, (Beijing, Caschen, Hanjun, Huyunti, Liuruizhe, Suhli, Xekai, Xueming), Colombia, Costa Rica, Cot d'Ivoire, Ecuador,



Egypt, Germany, Greece, Guatemala, Hungary, India, Indonesia, Iran, Iraq, Ireland, Italy, Japan, Malaysia, Mexico, Nepal, New Zealand, Nicaragua, Nigeria, Pakistan, Paraguay, Peru, Philippines, Romania, Russia, Saudi Arabia, Sri Lanka, Sweden, Syria, Tunisia, Turkey, Uganda, United Arab Emirates, United States, Uruguay, Venezuela, Singapore, Ukraine and United Kingdom celebrate John and his life of public service to astronomy and the art of amateur telescope making.

"Do not go where the path may lead, go instead where there is no path and leave a trail."

Ralph Waldo Emerson

John as the Mac Guyver of Astronomy was a great study in: determination - he blasted through roadblocks, was resourceful - had a plan B and C, he thought unconventionally - he repurpose materials, innovator - of an easy to make and use solar telescope and he solved the problem of a non-functional telescope mount.



John as the Pied Piper of Astronomy was a great study because: he inspired the masses, equipped others for ATM success, led with a pay it forward mentality, generously shared experiences, resources and information, created star parties, related to the common man, made telescope making easy to understand - "for dummies" , included everybody and challenged amateur astronomers conduct outreach and spearheaded a movement.

John as a Star Monk showed us how: to love of the cosmos as a spiritual experience, to understand our place in the Universe, to live simply without the pressures and stress of society at large, to respect the night sky as the resource that it is, to be a good steward the Earth and

night sky, to trust the cosmos to take care of us, to respect people of all kinds, to never take life for granted, or too seriously that you forget the important things.



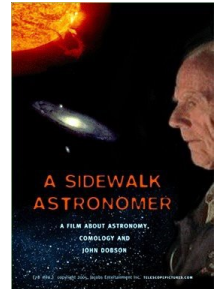
Ultimately John demonstrated by his life that - **life is always looking up.**

For information on John Dobson, telescope making, interviews, articles on John or written by John, and Sidewalk Astronomers calendar of events - please go to the Sidewalk Astronomers website at: sidewalkastronomers.us.

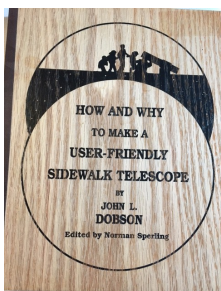
JOHN DOBSON IN THE MEDIA

In addition to many articles in print from various papers and magazines through the years, John was featured in two documentaries. In the first, "Universe - The Cosmology Quest", John appears along with Sir Fred Hoyle, Dr. Halton C. Arp, Dr. Margaret Burbidge, Dr. Geoffrey Burbidge, Dr. Jayant Narlikar and a host of other astronomers, cosmologist, and philosophers questioning the Big Bang Cosmology.

The second film, released in the summer of 2005, "A Sidewalk Astronomer" is an unscripted profile on John in tribute to his contribution to amateur astronomy. It provides a unique insight into the unique individual known as John Dobson. In addition, John was the only amateur astronomer highlighted in the PBS series, *The Astronomers*, and appeared twice on *The Tonight Show* *Starring Johnny Carson*. The Tonight Show appearances can be found at sidewalkastronomers.us website.

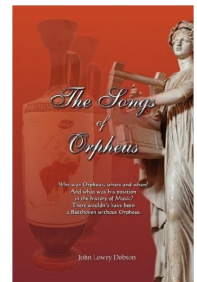


John wrote two booklets, *Advaita Vedanta and Modern Science* which he self published in 1979 and reprinted in 1983. It was slightly revamped and retitled, "Beyond Space & Time - Is there an uncaused cause behind the Deep Field?" in 2004. John took this information a bit further and gave it a more fiction-like theme and published it in 2008 as, "The Moon is New," a novel. John also penned, "Astronomy for Children Under 80," which explains his thoughts and philosophical take on astronomy.



In addition, John collaborated with Norman Sperling and together wrote a book with a wooden cover called, "How and Why to Make a User-Friendly Sidewalk Telescope" in 1991. Inside there is a brief biography with photos from the national park events and his travels and last half of the book is the step by step instructions on how to make a home made telescope.

In 2008 John published "The Songs of Orpheus," which talks about the ancient histories of Greece, Egypt, India, Rome, and Asia Minor and their interconnections.



John was even referenced in a book by, Timothy Ferris, called, *Seeing in the Dark*, where Timothy states, "The amateur astronomy revolution was incited by three technological innovations - the Dobsonian telescope, CCD light-sensing devices, and the Internet.