

## Your Fathers, Where Are They? And the Prophets, Do They Live Forever?

The book, told entirely in dialogue, follows the story of Thomas, a troubled man in his thirties haunted by the death of his friend Don Banh in a police shooting two years earlier. In an attempt to resolve the questions in his mind, he kidnaps seven people and brings them to a deserted Army base on the California coast, where he chains them to posts inside the abandoned buildings and forces them to discuss issues of concern to him, principally the lack of purpose and direction granted by American society to young men like him.

Thomas first kidnaps Kev Paciorek, a NASA astronaut he knew slightly in college, who always dreamed of flying on the Space Shuttle but has now lost that opportunity with the end of the Shuttle program. The other kidnapped persons are a Congressman, Thomas' former teacher, Thomas' mother, a policeman who shot his friend and finally a young woman named Sara.

The heart of the book lies in the conversation between Kev and the Astronaut. As another reviewer stated it's the downfall of the American dream, the idea that you can make yourself into anything, and if you fail, you must have done something wrong.

I got attracted to the book because of its cover showing the sketch of an astronaut together with the title which would not reveal its meaning at the first glance – and thus my "space-curiosity" got aroused. I extracted the relevant "astronaut" dialogue scenes from the book (not verbatim) and I want to offer my opinion about the raised criticisms.

Thomas (dialogue in "...") talks to Kev (his answers without quotation marks), his first victim, in Building 52 of the Fort Ord military base, the astronaut being tied to a post:

"Key, do you know Neil Armstrong died today?" I did not know that.

"How did that affect you?" I don't know, I was sad, he was a great man.

"He went to the Moon" – Yes he did. "But you want go to the Moon?" No, why would I go to the Moon? "Because you are an astronaut" Astronauts don't go to the Moon. "They don't go anymore – and how do you feel about it Kev?" Jesus Christ ... I don't care about going to the Moon. It hasn't been a NASA priority for 40 years."

"You wanted to be on the Shuttle."- Yes. -"You wonder how I knew that?" .... Every astronaut wanted to be on the shuttle. "Sure but I wanted to know how long you have wanted it. You told me one day you are going to go up in the Shuttle. Remember that?" -No. -"You probably said that a while ago... you inspired me." (... Kev finally admits after being threatened) A while ago I said I wanted to go up on the Shuttle.

"...Do you remember when you looked me in the eye and told me you were absolutely sure to go up on the Shuttle?" Yes I do.

"And where are you now? You are not on the Shuttle – the Shuttle is decommissioned –Right! A year after you became an astronaut. You actually became an astronaut. You went to MIT, got your master in aerospace, and you were in the Navy too. Everything you said you are going to do you did – it is incredible!"

The second I got to college 20 000 were ahead of me. I took all the steps – aerospace engineering, partial scholarship, Navy at Pesacola, then Patuxent River Airfield, F-13, KC 130 training, and even language training in Urdu.

"The shuttle flew from 1998 until 2008 and was decommissioned a year after you became an astronaut and they paraded the shuttle like a dead animal. Why don't we have a colony on the Moon yet? Why can we spent \$5 trillions on useless wars? We have the ISS but I never liked the thing – it is like a box-kite in space – and we have to buy seats on Russian rockets to get there. How come Russia has

money for rockets? What happened? After 18 years of training to go on the Shuttle they want you to fly on a Russian rocket to go on a hamster wheel in the space station."

... "We need something grand - we want to be part of an extraordinary, big, inspiring thing. not a space-kite like the ISS. There is a big difference between a reusable space ship like the Shuttle which can land on its own. Who says we don't want to be inspired? Don't we deserve grand human projects —which give us meaning?...."

Dave Eggers has some valid points with respect to the American space policy and I would like to share my opinion about the above criticism.

The enthusiasm for the space age faded after the grandiose achievements set in motion with Kennedy's declaration to set foot on the Moon - and to do it within the decade. And indeed it took just a decade from Shepard's first ballistic flight to setting foot on the Moon (Armstrong: "A small step..."). The first disillusion came when the Apollo program was stopped 1972 and the space Shuttle was not ready yet (first flight 1981-2011). The intermediate programs Skylab and Apollo-Soyuz did "not catch on" entirely.

The next big program was the "Space Station Freedom" mutating to the "International Space Station" (ISS). This was not a straightforward plan, but a plan with many technical, financial and political obstacles. In the end the ISS was saved by one single vote and a political event which nobody could foresee, the dissolution of the USSR. Technical setbacks during the program where introduced by the two space Shuttle accidents claiming the lives of 14 Astronauts.

The retirement of the Shuttle transportation system without a ready-to-go replacement system and the regress to the development of a brand new launch vehicle/capsule system without final decision of its purpose (exploring beyond earth orbit, but also servicing the ISS) ended for the USA being dependent on Russian rockets and Soyuz/Progress transporters for sending Astronauts to the ISS.

Eggers' (Kev's) complaint therefore is justified – but what was the real reason and what can be done about it?

First of all the initial main drivers, national pride and competition of political systems for superiority – which provided practically "bottomless funding" during the Kennedy-Apollo era does not exist any longer.

The new goals of either prospecting Asteroids, establishing a Moon base or setting foot on Mars cannot be done by one nation alone any longer. In our global world those enterprises have to be done globally, as demonstrated by the ISS. However more players make a complex program even more complex with respect to "national" goals, responsibilities and interfaces and the shouldering of the appropriate long term financial burden and the commitment to even honor them over several decades (not only administrative periods). All of this seems to make a realization impossible.

On the other hand I think the global desire exists and we still could be part of "grand human projects – which give us meaning". Yet, there are a couple of other aspects to be folded in: the NASA "commercialization - approach", our pressing global problems on Earth and the old question of "what good would human space exploration do for the tax-payer"?

I think space commercialization will take off on a totally different tangent, rather ending up in competition than global cooperation. Elon Musk will play a significant role, but it remains to be seen how far he can go on his own.

Then, what could be done to create a "grand inspiring" human project which unites the expectations of the global "tax payer" from space? A futuristic vison could be the creation of a Global Space Agency with the National Space Agencies organized in a federalist way. The goals must be communicated very transparently, like: where are we now, what do we want, what is needed to achieve the agreed goals and what would be the benefits of the goals achieved – and, most important who is paying for what?

Of course this is utopia – so, do we have to continue as we currently are doing – improvements and worsening included?

In my opinion Frank Schaetzing's brilliant bestseller [LIMIT] published in 2009 provides a possible technical-scientific architecture for the future "beyond ISS" (2025 onwards) which combines a lot of elements necessary for "grand inspiring projects". The plot brings together important ingredients like the continuation of a space station as "transfer station" for Moon-mining, space tourism and a luxury hotel on the Moon, technical and scientific challenges like He-3 fusion and propulsion reactors, new transportation/propulsion techniques and of utmost importance, international cooperation for Moon resources on several permanent Moon mining bases (America, China and others if they decide to join like Russia, India and Europe...).

For me this seems to be grand and inspiring enough as the next step – to learn our lessons and expand further into space, always keeping an eye on the growing Earth population (20 billion in 2050?) and the benefits gained through space exploitation (e.g., solving the energy crunch and with it all the troublesome associated problems on Earth).

Dave Eggers' conclusion seems to be a more pessimistic one for our future (as also the title suggests) because the book ends with "We are in here – everyone is safe"

It would be up to us – the space community – making sure to use the little influence we have to move in a more optimistic "Schaetzing-like" direction.

As Eggers states in his book, money should not be the problem because if 5 trillion dollars can be spent on wars – they could be better spent on the Moon.

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