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STANFORD SOCIAL INNOVATION *review*

15 Minutes

Thomas Vander Ark

SSIR Managing Editor Eric Nee spoke with the X Prize Foundation's president, Thomas Vander Ark, about how prizes can stimulate social innovation

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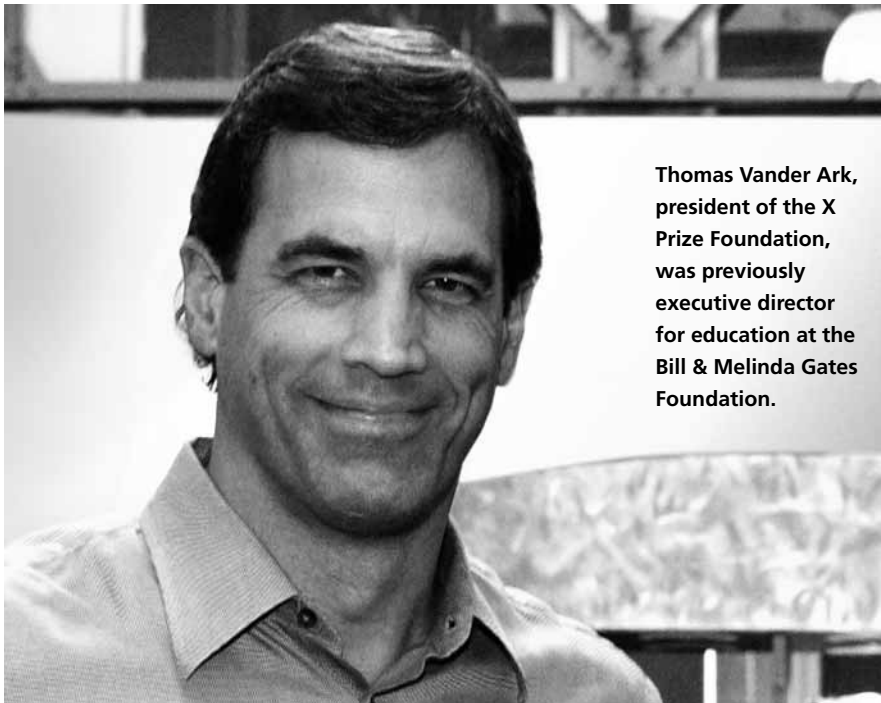
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EIGHTY YEARS AGO CHARLES LINDBERGH won the \$25,000 Orteig Prize by becoming the first person to fly nonstop from New York to Paris. Within three years the number of U.S. airports tripled and U.S. airline passenger traffic increased thirtyfold, creating what became known as the "Lindbergh Boom."

Contests like the Orteig Prize were once commonplace. They were used by governments, organizations, and individuals to spur innovation of all sorts – from exploration to new technologies. Prizes fell

out of favor in the latter half of the 20th century, but they have lately made a dramatic comeback, in part because of the popularity of the X Prize.

The X Prize captured the public's imagination in 2004 when a privately funded group won the \$10 million Ansari X Prize by launching the same manned spacecraft 100 kilometers above the Earth on two separate occasions within a two-week period. The foundation has gone on to announce two prizes – the \$10 million Archon X Prize to create a low-cost way to

sequence genes, and the \$20 million Google Lunar X Prize to land and operate a privately funded lunar rover.

In this interview Thomas Vander Ark, president of the X Prize Foundation, explains why he believes that prizes can create breakthrough technologies and programs. Vander Ark, the former executive director for education at the Bill & Melinda Gates Foundation, also discusses his plans to create similar prizes to improve education and reduce poverty.

ERIC NEE: What are the differences between traditional grant giving and using prizes as a way to stimulate social change?

THOMAS VANDER ARK: Quite simply, it's the difference between push and pull. Traditional philanthropy is a push mechanism. You pick an organization, you make an investment, you may provide advice and performance management, and you hope that they are successful and that the sector evolves as you had anticipated. Prize philanthropy is a pull mechanism where you set a goal, invite the world to compete, and hope to be surprised by the new money, the new minds, and the new methods brought to the competition.

Before we launched the Google Lunar X Prize, we could identify six or eight teams around the world that were likely to compete for that competition. Within 72 hours of announcing that prize, we had indications of interest from more than 125 teams from 25 countries. In a traditional philanthropic approach we would have been able to identify only a very small handful of these organizations. Even using an RFP strategy, we would probably have gotten to only a quarter of the potential respondents. But using a prize we will draw a large variety of teams; some existing compa-

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nies, and some new ones that will be formed for the competition.

What factors do you consider when putting together a prize?

First, we want an important goal that is difficult but achievable. Second, we want to know that if that goal is reached, we can assume that the market will invest additional money that will create the intended impact. Winning the prize is just the first step. We try to construct the prizes in a way that's likely to lead toward a larger, longer-term intended impact. With the Ansari X Prize the goal was to fly to an altitude of 100 kilometers twice in two weeks. The intended impact is personalized spaceflight. With the Archon X Prize for Genomics, the goal is to sequence 100 human genomes in 10 days for less than \$10,000 per genome. The intended impact is personalized medicine.

Is a prize always the best approach?

If there's a clear solution path, then traditional philanthropy or venture investing makes more sense. If you know what to do and who can do it, you ought to invest in those people. When it's not clear how the problem will be solved, then a prize mechanism is very useful.

One of the things that prizes seem to do best is to leverage your money and efforts.

Look at what happened when we created the Ansari X Prize. We raised \$2 million and turned that into a \$10 million prize purse. There were 26 teams that competed, spending more than \$100 million to win the prize. Since 2004 there has been more than \$1 billion committed to the personal spaceflight industry in public and private investments, at least in part as a result

of the Ansari X Prize. That leverage formula is unprecedented. I don't think there's anything else that you could invest in that produces those sorts of returns. And the magic of a prize is that one is awarded only if someone wins.

What other advantages do prizes offer?

There's tremendous advocacy potential in these global competitions. Our first prize, the Ansari X Prize, produced some important technological innovations, but the most important outcome may be that it changed public perception of what's possible. Before, the world assumed that space travel was something that only governments could do. That changed on Oct. 4, 2004, when it became clear that private enterprise had a place in space as well. The automotive X Prize, which we will launch in January, will produce important technology and innovations, but perhaps more important, it will change public perception of what's possible. People will see high-performance, high-efficiency, low-emission, attractive cars at a reasonable price. We're quite confident that it will help reshape the automotive industry not just by creating a new generation of cars but by helping to develop a market for those cars.

There is the potential to use high-profile competitions to create heroes and to tell stories in a way that is a new form of advocacy. Take the automotive prize. In addition to changing perceptions about cars, it could very well lead to local, state, and national changes in regulation. We think the competition will usher in new public policy strategies and do so much more quickly and much more efficiently than a traditional lobbying effort. So when I say prizes are a social

change lever, I mean prizes are a strategy to change perception and policy and to do so quickly and efficiently compared to traditional means.

Our culture does like competition.

That's true. You can't turn the TV on these days without seeing one and often two different competitions, from "American Idol" to "American Inventor." I think that the world – particularly Americans – is quite attracted to competitions. That bodes well for the next dozen prizes that we will launch. We will do so with media partners in print, Web, and television, and you can count on these being very high profile events that capture the world's imagination.

Can prizes be used to solve social problems like poverty and illiteracy as well as technical ones like spaceflight and fuel-efficient cars?

It's a challenge to use inducement prizes to promote breakthroughs in public delivery systems like health and education. But we are committed to advancing the field and learning as much as we can about those categories. In education, for example, I'm confident that we'll be able to identify several entry points where prizes can make a big difference.

One example is online learning tools. Educational technology is more than 10 years behind where it should be. Education is still the ancient practice of a teacher in a room with 25 kids. There's clearly the potential for creating sophisticated learning tools that continuously diagnose need and interest and create customized content. Yet there's been very little spent in this field because the returns to investors have been weak. We believe that a well-constructed prize could produce hundreds of millions of dol-

lars of investment and help usher in a new generation of learning tools in both formal and informal settings.

What other types of education competitions are you considering besides online learning tools?

We're exploring competitions where dozens of cities around the country, and perhaps around the world, would share a common goal and would use a variety of strategies to achieve that goal. We would structure the prize in a way that would help to create a school improvement marketplace that would bring more for-profit and non-profit organizations into what is today a very weak market. There are few robust organizations that can design and implement an effective improvement strategy at any scale, and I think a prize could help to open that marketplace up.

You had a lot of experience trying to improve the educational system using traditional means when you were in charge of the educational program at the Gates Foundation.

It was really hard. We spent \$2 billion on schools and \$2 billion on scholarships. Take an organization like First Things First, a small, high-quality nonprofit with a proven improvement method. Even with a great executive team, a strong board, and several grants from us, it was very difficult to scale that organization into a sustainable business.

How will a prize change that?

Imagine that instead of "American Idol" it's "American Education," and there's a national competition that focuses the country's attention on an important education goal that rallies the support of several dozen communities around the country. The folks

leading those local efforts would be much more likely to raise money if they are part of this larger effort. The focus and energy that a competition would bring could develop a whole new round of investments from the public and private sectors.

There's an innovative strategy group in Dallas called Advanced Placement Strategies that provides incentives to students and teachers for passing AP courses. There are some people who love that idea and others who hate it. The Advanced Placement Strategies approach could be one of the strategies that some cities might consider if they choose to participate in an education X Prize.

I could imagine a lot of educators and teachers not reacting all that well to the idea of schools competing with one another.

That's true.

And you'd want their support to create lasting change.

That's right.

How are you going to address that?

That's why this work is so interesting. There is obviously no easy answer to that question. I think it would mean that there would be some people who'd be very enthusiastic and others who wouldn't. The short answer is that the folks who aren't enthusiastic don't need to participate.

Let's talk about another area that you have selected for a prize – poverty reduction. What are your ideas for solving that problem?

This is really an enterprise approach to poverty reduction. We hope to create a prize or a series of prizes that would provide incentives for job creation in low-income countries. The

prize would be awarded to entrepreneurs, not countries. We have a very strong bias in favor of entrepreneurial solutions, rather than trying to promote regime change.

What we're working on right now is a new set of metrics that could be used to judge competitors so that it's not just measuring jobs created or wages paid. We'd like also to give some consideration to the type of businesses that are created. Are these sustainable jobs? Is the company environmentally responsible?

It is clear that we'll have to retrofit the model by helping to improve access to capital so that all of the competitors have an opportunity to compete. The second challenge is market development, an issue that could be addressed through advance purchase commitments (APCs). President Clinton demonstrated the power of APCs by aggregating demand for the drug AZT to treat AIDS. It's our sense that if you put together a well-constructed prize, access to capital, and market development strategies, you have a fairly robust enterprise approach to poverty reduction.

Given the challenges of bringing a prize model to social problems, why not stick with science and technology where you know that the model works?

The simple answer is that this is a powerful concept and needs to be tried. We certainly haven't figured out how to get quality at scale in education using other approaches. I tried it myself when I was a school superintendent. And from a philanthropic standpoint, I know the challenges as well as anybody. So although prizes are no silver bullet, I am confident that they will be a powerful change lever in the social sector. □