The Venus Project

Beyond Politics, Poverty and War

The magazine | Issue #1

RESOURCE-BASED-ECONOMY

What is it and how does it work ?

VIDEO INTERVIEW

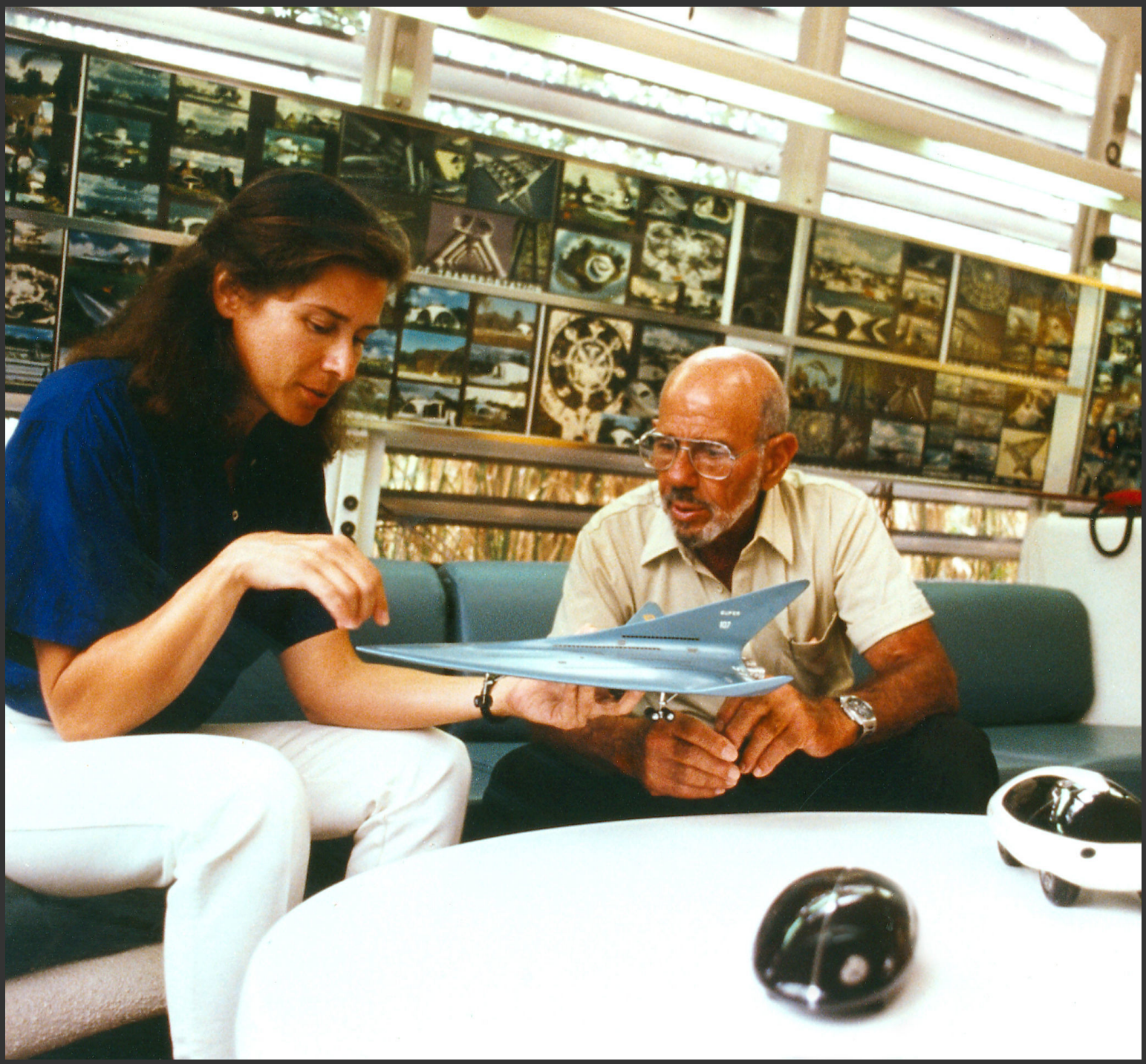
Jacque Fresco talks with *Larry King*

MAJOR MOTION PICTURE!

A vision of the future.

NEW CITY SYSTEMS

Smart sustainable designs that work with nature



The Venus Project is an organization that proposes a feasible plan of action for social change, one that works towards a peaceful and sustainable global civilization. It outlines an alternative to strive towards, where human rights are no longer paper proclamations but a way of life. The Venus Project advocates an alternative vision for a sustainable new world civilization unlike any socio-economic system that has gone before, known as a Resource-Based Economy. Founded by Jacque Fresco – Industrial Designer, Social Engineer, Futurist, Inventor, and commonly referred to as a modern day DaVinci, Fresco demonstrates what the future can be if we apply our science and technology to the benefit of humankind and the planet and not the profits of individuals, corporations or even nations.

All socio-economic systems, regardless of political philosophy, religious beliefs or social customs, ultimately depend upon natural resources i.e. clean air and water, arable land and the necessary technology and personnel to maintain a high standard of living. Simply stated, a Resource-Based Economy utilizes existing resources rather than money and provides an equitable method of distributing these resources, in the most efficient manner for the entire population. It is a system in which all goods and services are available without the use of money, credits, barter or any other form of debt or servitude.

Earth is abundant with plentiful resources; today our practice of rationing resources through monetary methods is irrelevant and counter-productive to our survival. Modern society has access to highly advanced technologies and can make available food, clothing, housing, medical care, a relevant educational system and develop a limitless supply of renewable, non-contaminating energy such as geothermal, solar, wind and tidal etc. It is now possible to have everyone enjoy a very high standard of living with all of the amenities that a prosperous civilization can provide. This can be accomplished through the intelligent and humane application of science and technology.

A Resource-Based Economy

To better understand the meaning of a Resource-Based Economy, consider this: if all the money in the world were destroyed, as long as topsoil, factories and other resources were left intact, we could build anything we choose to build and fulfill any human need. It is not money that people need; rather, it is free access to the necessities of life. In a Resource-Based Economy, money would be irrelevant. All that would be required are the resources and the manufacturing and distribution of the products.

When education and resources are made available to all people without a price tag, there would be no limit to the human potential. Although this is difficult to imagine, even the wealthiest person today would be far better off in a Resource-Based Society, as proposed by The Venus Project. Today, the middle classes live better than kings of times past. In a Resource-Based Economy everyone would live better than the wealthiest of today.

In a Resource-Based Society, the measure of success would be based on the fulfillment of one's individual pursuits rather than the acquisition of wealth, property and power.

Interview with Jacque

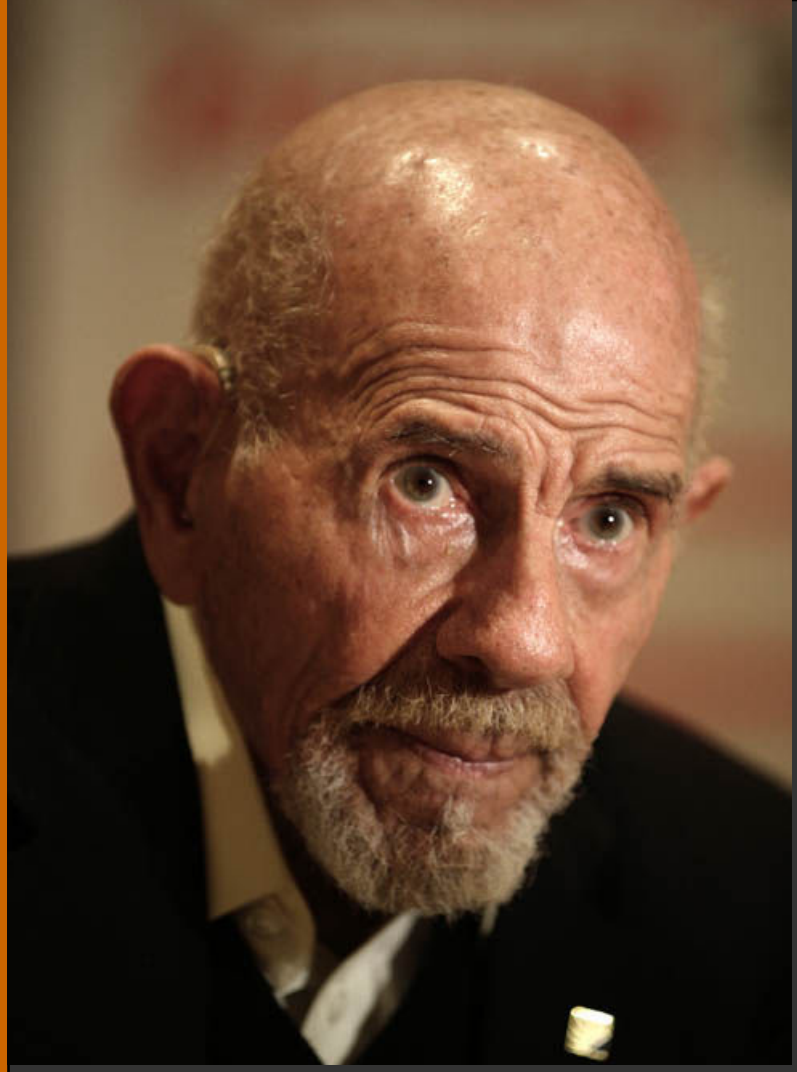
Was there something specific you experienced that made you first begin thinking about alternate forms of living, or was it more of a compilation of experiences?

Living through the 1929 Great Depression helped shape my social conscience. During this time, I realized the earth was still the same place, manufacturing plants were still intact and resources were still there, but people didn't have money to buy the products. I felt the rules of the game we play by were outmoded and damaging. This began a life-long quest, resulting in the conclusions and designs presented in The Venus Project.

Conditions of misery, suffering, war and war profiteering were the incentive and inspiration for my work. I was also motivated by the seeming incompetence of governments, the academic world and a lack of solutions from scientists.

Many fail as generalists because of their over-specialization on limited aspects of social problems. Scientists, politicians and academicians see problems from inside the system they're in, which is what's responsible for the problems in the first place. I am disappointed with those who worry about terra-forming other planets while our own is still full of war, poverty, hunger and environmental neglect.

Working with drug addicts, alcoholics and so-called juvenile delinquents in New York City convinced me that instead of working with individuals, more effective methods would deal with the societal conditions that create dysfunctional behaviors in the first place.



Can you remember your very first design moment?

Yes. When I was about 13, one of my relatives stuck his hand into a metal fan while it was on. This led me to design a fan with rubber or fabric blades. I submitted the design to some companies but they showed no interest. Shortly after that, the product came out on the market. This was my introduction to the market place.

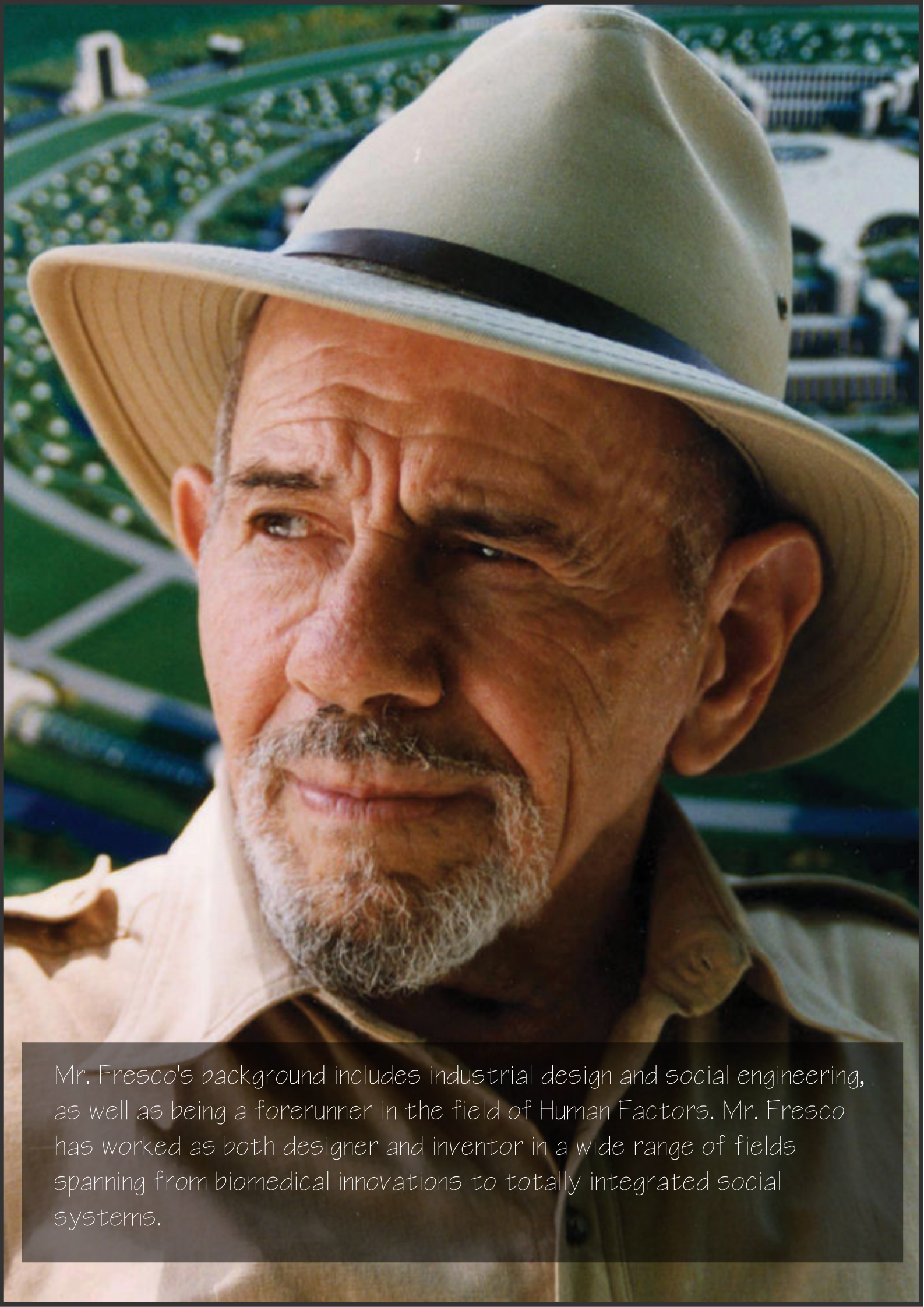
Once when I was 10, I designed a special candle for a religious sect in New York City. They weren't permitted to put out a candle on their holy days so I designed one that would self extinguish at any hour they desired. I timed the burning of the candle for whatever amount of time was needed. Then I cut the wick at different points in the candle that correlated with different times and pulled the remaining wick out from the bottom of the candle.

Mr. Fresco, I'm noticing in your work a great faith on changes and a great positiveness towards things that seem impossible, or at least possible in a distant future (like the sea colonization forecast), what I'm asking myself is: where do you take this great trust in challenges from?

Working in the aircraft industry I learned a lot about planes that move in three dimensions and undergo a wide range of stresses. It was essential to consider many things that differ from static structures on the ground. There were challenges like simplifying design, eliminating conspicuous waste and obtaining the greatest performance with a minimum expenditure of energy.

Another factor encouraging my positive attitude about problem solving was World War II, when the U.S. spent billions of dollars for weapons of mass destruction in the Manhattan Project. Cost was no object and it was one of the largest and best-financed projects undertaken to that date. I realized the same energies that went into the Manhattan Project could be channeled to improve and update our way of life and to achieve and maintain the optimal symbiotic relationship between nature and humankind. If we are willing to spend that amount of money, resources and human lives in times of war, we must ask why we don't commit equal resources to improving the lives of everyone and anticipating humane needs for the future, in times of peace.

When scientists were called upon to solve problems of a military nature, the answers were immediately forthcoming. This demonstrated to me the ability of science and technology to solve problems when properly organized and funded, but it is shameful that these methods are not applied to solving social problems on a global scale. It is also shameful when billions are spent on space projects for terra-forming uninhabited planets to make them habitable while our own planet is neglected, and the land, sea, and air are polluted. In my work I am not attempting to predict the future. I am only pointing out what is possible with the intelligent application and humane use of science and technology. This does not call for scientists to manage society. What I suggest is applying the methods of science to the social system for the benefit of human kind and the environment.



Mr. Fresco's background includes industrial design and social engineering, as well as being a forerunner in the field of Human Factors. Mr. Fresco has worked as both designer and inventor in a wide range of fields spanning from biomedical innovations to totally integrated social systems.

RESUME

- Aircraft Designer for the Northrop Division of Douglas Aircraft, Los Angeles, California

- Design consultant for Rotor Craft Helicopter Company, Los Angeles, California

- Design consultant for Landgraf Helicopter Co., Los Angeles, California

- Co-creator of Revel Plastics Company with Lou Glaser

- Designer in the Army Air Force Design and Development Unit, Wright Field, Dayton, Ohio

- Design Developer of experimental equipment for behavioral scientist, Keller Breland

- Director of Scientific Research Laboratories, Los Angeles, California

- Architectural Designer of pre-fabricated industrial buildings for Houser Industrial Co., Los Angeles, California

- Architectural Designer for Trend Homes, Inc., Los Angeles, California

- Design Developer of three-dimensional projection systems for Paramount producer Jack Moss

- Research Engineer for Raymond De-Icer Corp., Los Angeles, California

- Technical Consultant to the Motion Picture Industry, including technical advisor and effects creator for the film Project Moonbase (1953) written by Robert A. Heinlein; for Encyclopaedia Britannica Films; and for Camera Eye Pictures, Inc., for the film, The Naked Eye (1956), which won the Robert J. Flaherty Award for creative film documentary and was nominated for an Academy Award.

- Colleague and work associate of Donald Powell Wilson of Los Angeles, the noted psychologist who wrote My Six Convicts.

- Industrial Design Instructor at the Art Center School in Hollywood, California

- Design Consultant for Major Realty Co. and Aluminum Co. of America (Alcoa)

- Creator of Jacque Fresco Enterprises, Inc. for the development of prefabricated aluminum devices

- Design Developer of electronic devices for the Parkinson's Institute of Miami

- Founder and Director of Sociocyberneering, Inc., Miami, Florida, the forerunner to the Venus Project

- Founder and Director of the Venus Project, Venus, Florida

City Systems

It would be far easier and would require less energy to build new, efficient cities than to attempt to update and solve the problems of the old ones. The Venus Project proposes a Research City that would use the most sophisticated available resources and construction techniques. Its geometrically elegant and efficient circular arrangement will be surrounded by (and incorporated into the city design) parks and lovely gardens. This city will be designed to operate with the minimum expenditure of energy using the cleanest technology available, which will be in harmony with nature, to obtain the highest possible standard of living for everyone. This system facilitates efficient transportation for city residents, eliminating the need for automobiles.


VIDEO INTRO
THE VENUS PROJECT

The central dome or theme center will house the core of the cybernated system, educational facilities, access center, computerized communications, networking systems, health and child care facilities.

The buildings surrounding the central dome provide the community with centers for cultural activities such as the arts, theater, exhibitions, concerts, access centers and various forms of entertainment.

Next is the design and development complex for this research and planning city. The design centers are beautifully landscaped in natural surroundings.

Adjacent, the research facilities are dining and other amenities.

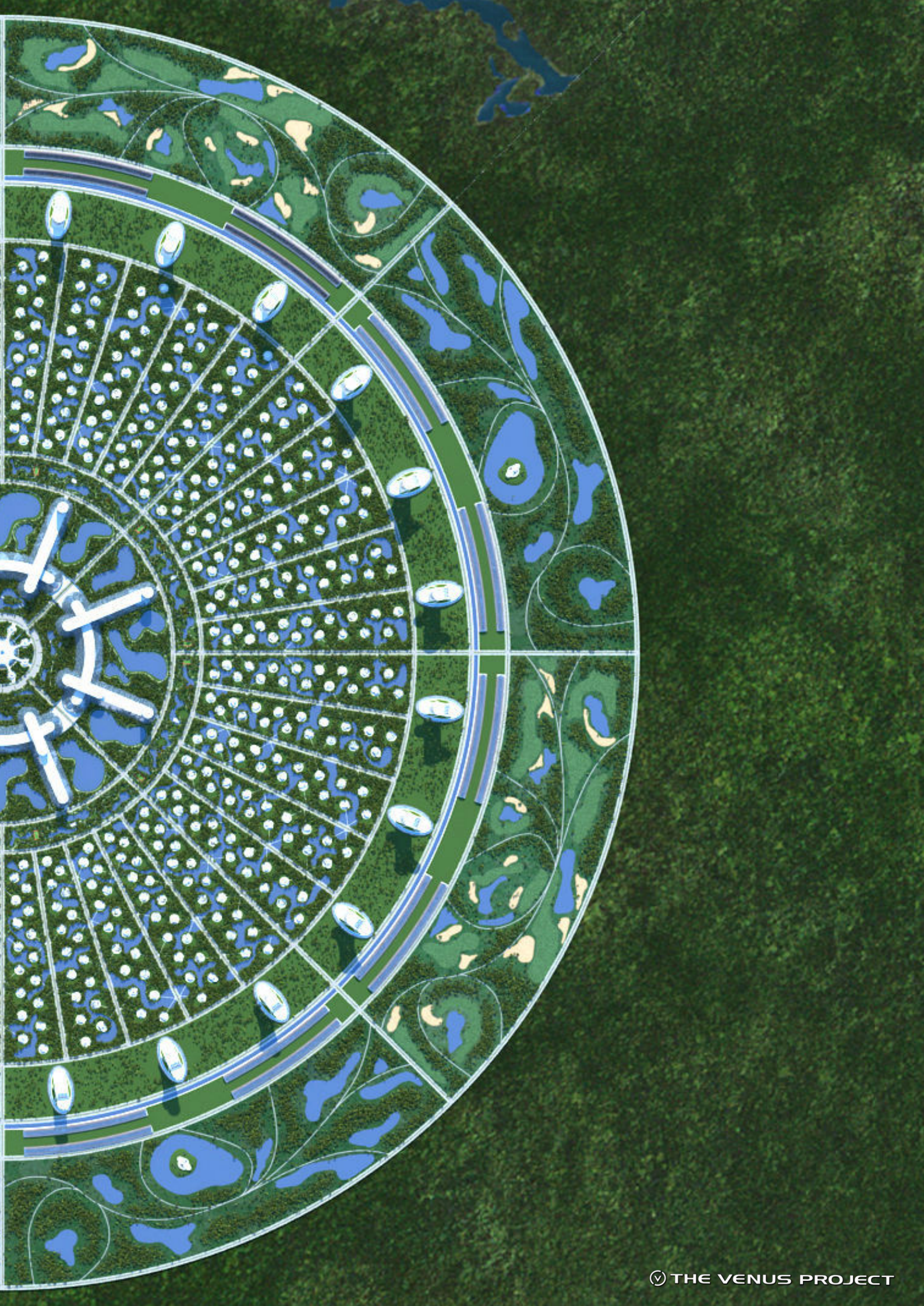
The eight residential districts have a variety of free form unique architecture to fulfill the various needs of the occupant. Each home is immersed in lovely gardens, isolating one from another with lush landscaping.

Areas are set aside for renewable clean sources of energy such as wind generators, solar, heat concentrating systems, geothermal, photovoltaic and others.

Next are the indoor hydroponic facilities and outdoor agricultural belts which will be used to grow a wide variety of organic plants without the use of pesticides.

A circular waterway for irrigation and filtration surrounds the agricultural belt.

The outermost perimeter is utilized for recreational activities such as biking, golfing, hiking and riding etc.



Cybernated Government

The Venus Project calls for a cybernated society in which computers could replace the outmoded system of electing politicians that in most cases represent the entrenched vested interests. This new technology will not dictate or monitor individuals' lives, as in The Venus Project this would be considered socially offensive and counterproductive. Books such as 1984 and Brave New World, motion pictures such as Blade-Runner and Terminator 2 have spawned fear in some people regarding the takeover of technology in our society. The Venus Project's only purpose is to elevate the spiritual and intellectual potential of all people, while at the same time providing the goods and services that will meet their individual and material needs.

Cybernation is the linking of computers with automated systems. Eventually, the central cybernated systems will coordinate all of the machinery and equipment that serve the entire city, the nation and ultimately the world. One can think of this as an electronic, autonomic nervous system, extending into all areas of the social complex.

For example, in the agricultural belt the computers could automatically monitor and maintain the water table, soil chemistry and coordinate the planting and harvesting of crops. In the residential sector, the system could maintain environmental cleanliness and the recycling of waste materials

In addition, to ensure the efficient operation of the city's various functions, all of the processes and services could be equipped with electronic environmental feedback sensors. These sensors could be coordinated with redundant, back-up systems that could operate in the event of failure or breakdown of the city's primary systems.

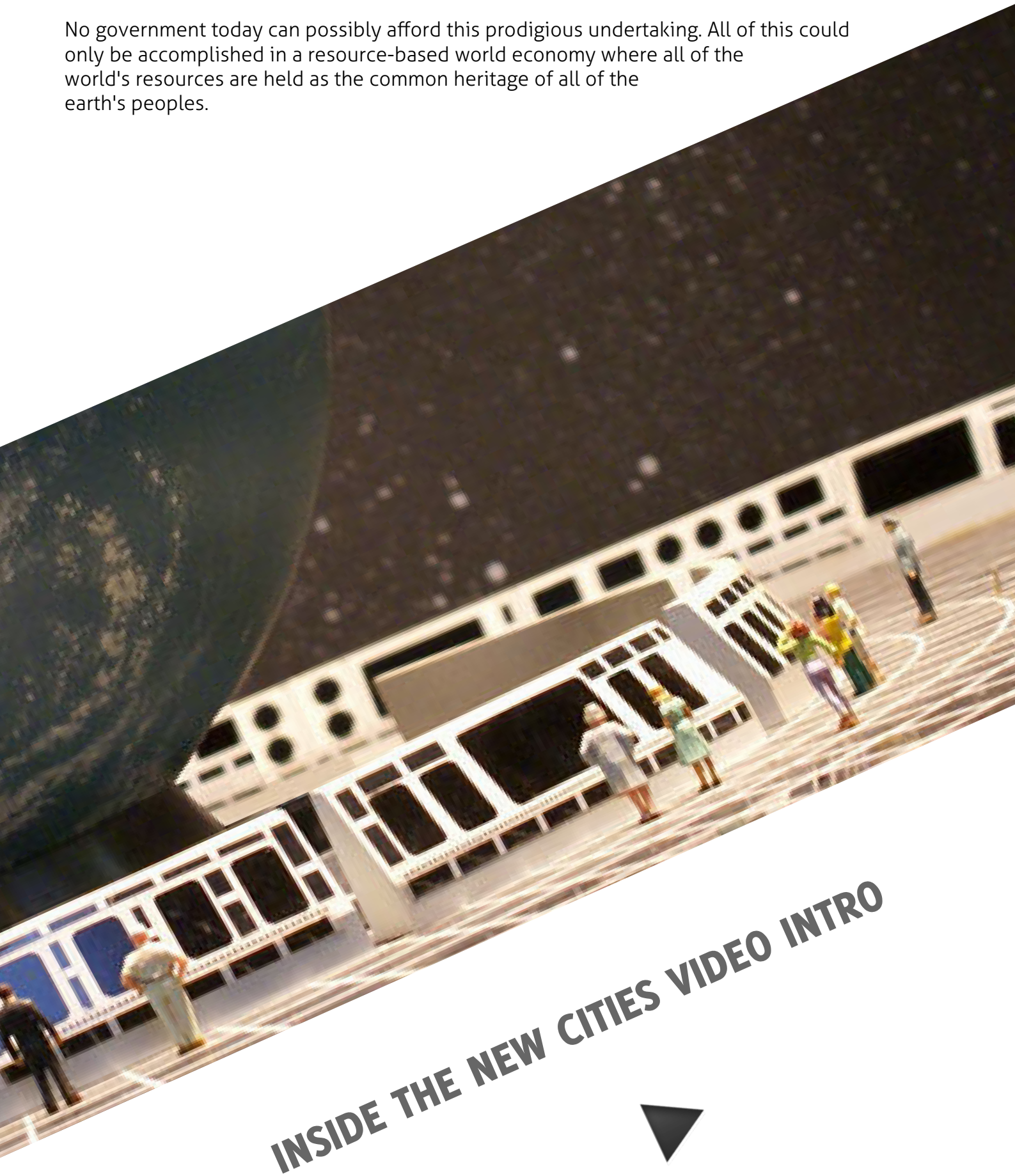
Only when cybernation is integrated into all aspects of this new and dynamic culture can computers appropriately serve the needs of all people.

No technological civilization can ever operate efficiently and effectively without the integration of cybernetics as an integral part of this new world civilization.

These proposals, from an engineering standpoint, seem fantastic and unfeasible within the present monetary system; and they are.

The sums involved in ventures of this magnitude would be too huge and inconceivable.

No government today can possibly afford this prodigious undertaking. All of this could only be accomplished in a resource-based world economy where all of the world's resources are held as the common heritage of all of the earth's peoples.



INSIDE THE NEW CITIES VIDEO INTRO

University of Global Resource Management

This University of Global Resource Management and Environmental Studies or "world-university," is a testing ground for each phase of development. This would be a dynamic, continually evolving research institute open to all of society. Student performance would be based on "competence accreditation" and research findings would be periodically applied directly to the social structure to benefit all members of the world society. People will live in these experimental cities and provide feedback on the reliability and serviceability of the various structures. This information would be used to formulate modifications to structures so that maximum efficiency, comfort, and safety is assured. This facility is also used to develop modular construction systems and components that can be installed to serve a wide range of needs and preferences. In most instances, the external appearance of the buildings will reflect the function of the building - they are designed "from the inside out."

Skyscrapers

These skyscrapers would be constructed of reinforced and pre-stressed concrete, steel and glass. They will be stabilized against earthquakes and high winds by three massive, elongated, tapered columns. These support structures will surround the cylindrical central tower, which is 150 feet wide. This tripod-like structure would be reinforced to diminish compression, tension and torsion stresses. These super-size skyscrapers will assure that more land will be available for parks and wilderness preserves, while concurrently helping to eliminate urban sprawl. Each one of these towers will be a total enclosure system containing an access center, as well as childcare, educational, health and recreational facilities. This will help alleviate the need to travel to outside facilities.

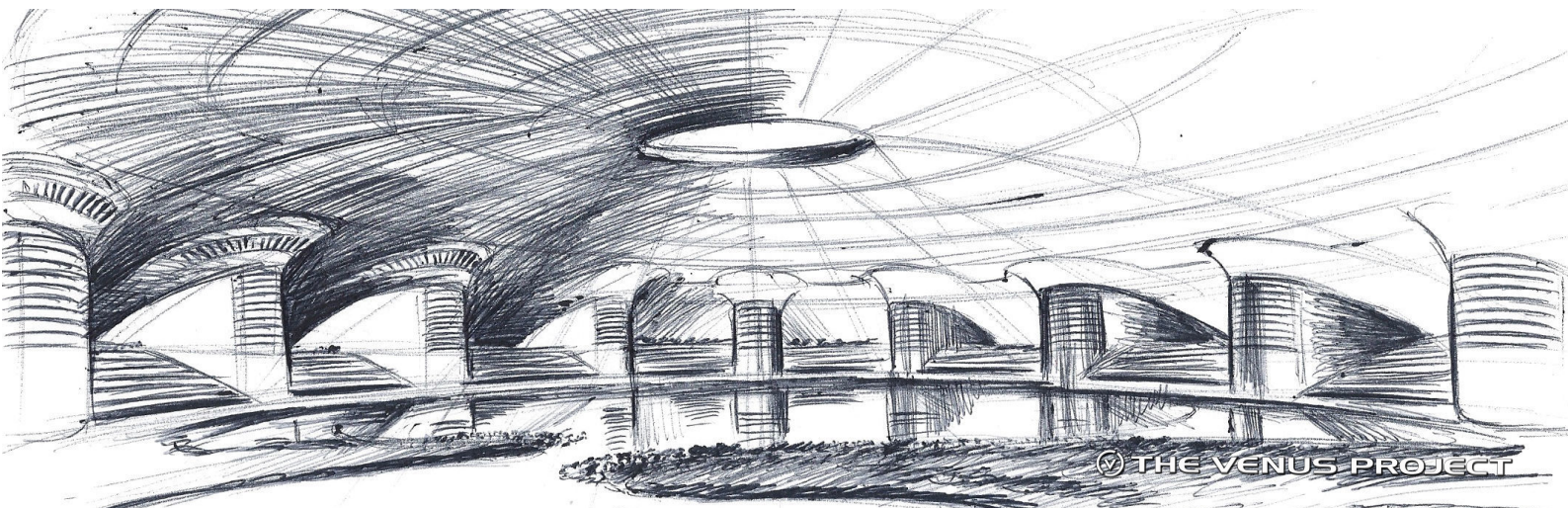
If we do not maintain a balance between the population and the earth's carrying capacity, we may have to move our cities not only skyward and seaward but subterranean as well.

Subterranean Cities

For inhospitable regions of the planet, such as polar and desert areas, underground cities would provide entirely comfortable homes for many. Numerous elevators will readily allow residents to enjoy skiing and other recreational activities on the surface. The primary source of power for these cities, where feasible, would be geothermal energy.


THE VENUS PROJECT


THE VENUS PROJECT


THE VENUS PROJECT


"The Venus Project is not
about new cities or new
architecture. It's about a
new way of thinking"

MAJOR MOTION PICTURE

Our aim is to develop a serious major motion picture depicting life in a Resource Based Economy. This film would be designed to reach the general public throughout the world to introduce an exciting, sustainable new social direction, depicting a vision of what our future can be if we intelligently apply science and technology with environmental and human concern. A future where war, poverty and hunger could be but a distant memory.

Today, we face very trying times where economies and countries are teetering on the brink of chaos. Our resources are being depleted through waste and irresponsible management. Technology is displacing jobs that are not coming back. Most of our energy needs are obtained through methods which are destructive to the environment and ourselves, through the plundering of finite resources which are being consumed at an alarming rate. Existing social institutions are not taking the consequences of this same course of action seriously. These and many more problems will be culminating in the near future and we are not prepared to deal with what is coming.

This film will offer a possible alternative to this global dilemma. It will be an awakening to many and could point a positive direction to work toward. It portrays in detail a global civilization, which secures, protects and encourages a more humane world for all people - something we have not been able to do throughout history - where all of the world's resources become the common heritage of all of the earth's people.

This does not presume to imply a utopian civilization but one that is always in the process of modification and change; an emergent society where our technology is used to benefit the lives of all.

The film would provide a vision of a peaceful society in which all human beings work toward a global family on planet Earth. A civilization in which all people are engaged in the pursuit of a better understanding of themselves and the world they share.

THANK YOU! The current fund for the motion picture movie is $209,000.

The Venus Project has exceeded its goal of $100,000 to hire a scriptwriter for the major motion picture. We deeply appreciate all the dedication and participation from those who donated and encouraged others to do so.

A good deal of this amount was from small donations therefore a large number of people donated.

DONATE >

FAQ

Why do you feel that an approach as revolutionary as The Venus Project is necessary?

Our current system is not capable of providing a high standard of living for everyone, nor can it ensure the protection of the environment because the major motive is profit. Businesses aren't entirely to blame; they are forced to operate this way in order to retain the competitive edge.

Additionally, with the advent of automation, cybernation and artificial intelligence, there will be an ever-increasing replacement of people by automated systems. As a result, fewer people will be able to purchase goods and services, even though our capability to produce an abundance will continue to exist. This is well-documented in Jeremy Rifkin's book The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-market Era (Putnam, 1995).

The Venus Project offers a fresh approach that reverses the negative aspects experienced in our current applications of automation and artificial intelligence. This project eliminates the disastrous consequences that such approaches can have on our society, i.e. the displacement of millions of workers, skilled and unskilled alike.

Isn't it just decent people that we need in government?

It is not enough to criticize, point out the shortcomings of society, or advocate that people of high moral character be elected into office; this would do little to advance civilization. What is needed is the intelligent management of the world's resources, and a comprehensive and workable arrangement of environmental and social affairs that are in strict accord with existing resources and the carrying capacity of our planet.

Even with the election of men and women of impeccable character into government, without available resources and advanced technology, war, poverty and corruption will prevail no matter how many new laws are passed or treaties signed. It is not democracy that elevated our standard of living, it is our resources, water, arable land and new technology. Rhetoric and paper proclamations are irrelevant in the management of human and social affairs.

Elaborate a bit, if you will, on your views regarding money.

If all the money in the world were destroyed, as long as we have sufficient arable land, the factories, the necessary resources and technical personnel, we could build anything and even supply an abundance.

During the Depression, there were vacuum cleaners in store windows and automobiles in car lots. The Earth was still the same place. There was just no money in people's wallets and very little purchasing power.

At the beginning of World War II, the U.S. had about 600 first-class fighting aircraft. We rapidly overcame this short-supply by turning out over 90,000 planes per year. The question at the start of World War II was: Do we have enough funds to produce the required implements of war? The answer was no, we did not have enough money or gold, but we did have more than enough resources. It was the available resources and technical personnel that enabled the U.S. to achieve the production and efficiency required to win the war. It appears that the real wealth of any nation is in its natural resources and its people who are working toward a more humane life-style, through the elimination of scarcity.

All social systems, regardless of the political philosophy, religious beliefs or social mores, ultimately depend upon natural resources -- i.e. clean air and water and arable land area -- and the industrial equipment and technical personnel for a high standard of living. The money-based system was designed hundreds of years ago and was hardly appropriate for that time.

We still utilize this same outmoded system, which is probably responsible for most of today's problems. I have no doubt that even the wealthiest person today would be far better off in the high-energy society that The Venus Project proposes.

the ku klux klan experiment

From a Conversation with Jacque Fresco

I thought of working on a design for a global society. That, what I had put on paper sounded good to me but I said, "How do you know it'll work?" to myself, that's what thinking is. So I said, "I don't know it'll work," but I certainly am going to try to see if it'll work.

So I attended many clan meetings - 'KKK' - got the feel of the organization and then proceeded to show them things that would contradict their statements. I didn't contradict them. I showed them things, such as the face of a person and asked one of the guys – who always projected his own values into everything he saw – to see if he could work out where the person was from and as much detail about them as possible from the photo.

As expected, he projected his values into the image I had on the screen and he said "He looks like a good American and a kind person and a family man, a religiousman."

So then, I revealed the bottom of the picture, which I got at the post office. This guy was wanted by the FBI for subversive action against the United States. To help show this guy that it's not possible to look at a photograph of a person and tell about them. Sometimes you might accidentally hit, but on the whole you would hurt yourself.

Then I would project a voice and it would sound like a guy talking about aeronautics with an English accent, and he tries to picture the guy in his mind. Then the image comes on later. It's a black guy raised in England, and that confuses them (members of the KKK). So by the time I got to the sixth character, he says, "Jacque, I can't rightly say." Once he's learned to speak that way, even that's a great move.

Sure, he still has remnants of his feelings but I undo it in a gentle way. You know what I mean? Until they no longer find that their earlier beliefs are viable. They have viable beliefs, but they think they're changing themselves. I put in the elements that change people.

Larry King interview with Jacque Fresco (1974)

L.King: " Does it bug you that...people, when they talk about Jacque Fresco in Miami, say that he's someone who is, "Too far ahead of his time," "We're not ready for advanced kind of thinking"- of that type. Does it bug you? "

J.Fresco: " I Imagine every creative person in every field encounters that sort of problem. No, it doesn't. I can't afford it. "

FULL VIDEO INTERVIEW

Larry King (born November 19, 1933) is an American television and radio host whose work has been recognized with awards including two Peabodys and ten Cable ACE Awards.

He began as a local Florida journalist and radio interviewer in the 1950s and 1960s and became prominent as an all-night national radio broadcaster starting in 1978.

From 1985 to 2010, he hosted the nightly interview television program Larry King Live on CNN. He Currently hosts Larry King Now

RESEARCH CENTER


VIDEO TOUR

Many of the ideas are being translated into reality NOW. Phase One of The Venus Project is the twenty-one acre design center in still pristine south-central Florida, where the future is currently taking shape. The actual buildings and conference center are supplemented by models, illustrations, blueprints, posters, books and video presentations. These are the first steps that have been completed to help one see, feel and touch the future.

Why are the first buildings designed for The Venus Project dome-shaped? The dome requires the least amount of material to enclose a given area. It offers ease of fabrication and prefabrication. It is the shape of maximum strength and stability. When properly engineered, the dome can withstand extremely high wind loads and is resistant to earthquakes, termites, rodents and fire. Most of all, being constructed of concrete, it preserves our forests.

The domes use reinforced concrete and other composit materials, which are readily available and easy to fabricate. It is well insulated and soundproof. It offers limitless potential of freeform design configuration. We can fabricate kitchen cabinets, furniture and a great deal of the interior as an integral part of the building, which requires little maintenance and repair. Nature has evolved the dome configuration as the most efficient enclosure for the human brain; thus, it could be said that we all live in domes!

The buildings shown are the shape of things to come - not just the shape of architecture, but of a way of life that is attainable now. It can be clean, secure, high-tech, aesthetically pleasing and yet in harmony with nature. The Venus Project provides the best of science and technology, while preserving nature's
balance.

TOUR

21 Valley Lane
Venus, Florida 33960 USA

During the tour, Jacque Fresco will speak for several hours, walk you around the grounds, show and describe the models, present a 15 minute DVD and take any questions you may have. This will give you a better understanding of yourself and the world around you. The cost of the lecture and tour is $200 for each person or household. For this price, you also receive a package of a book and 4 DVD's, valued at $100. As we are not sponsored by anyone currently, this helps to support the project and enables you to learn more about it.

BOOKMARK NOW >

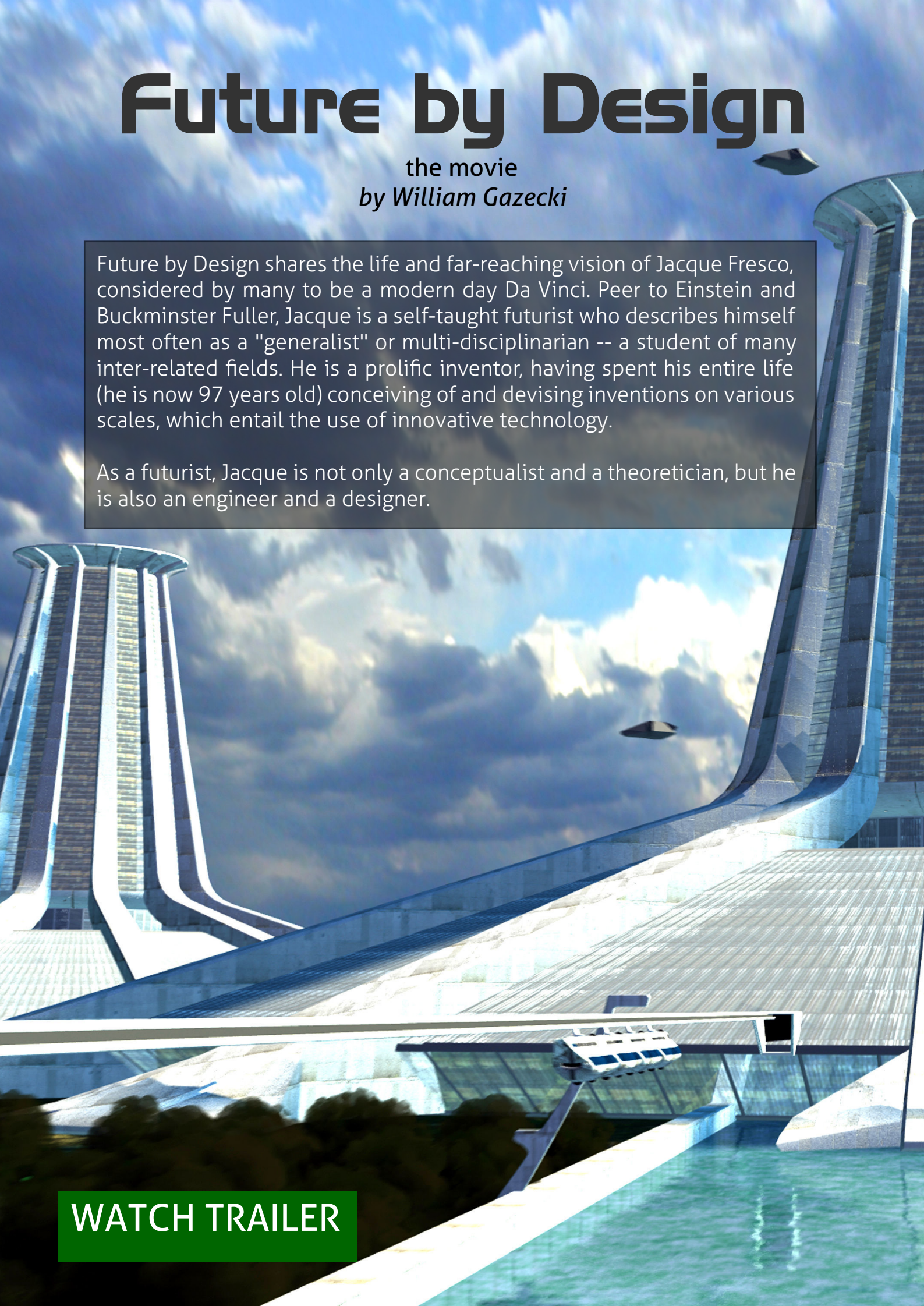
Future by Design

the movie

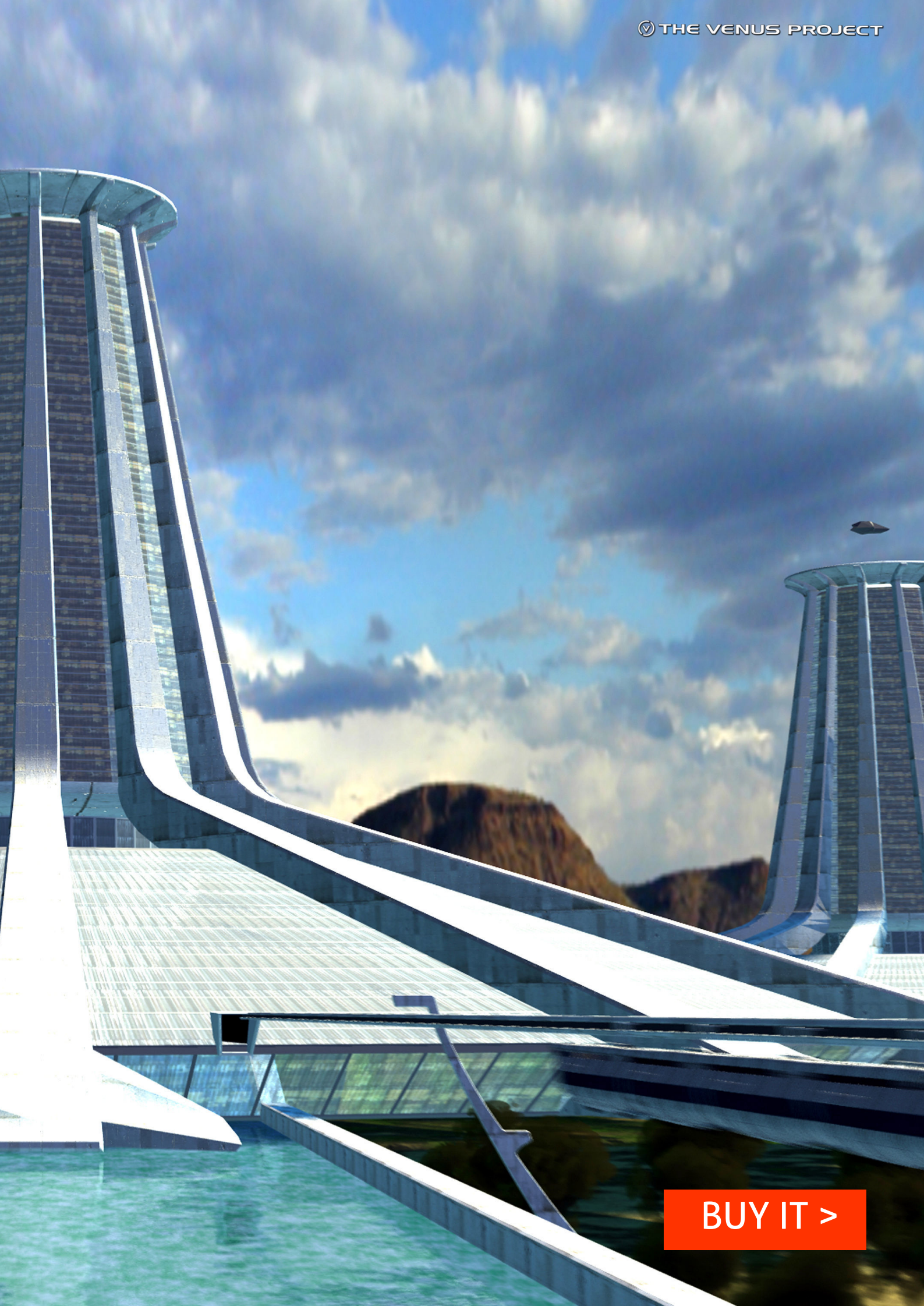
by William Gazecki

Future by Design shares the life and far-reaching vision of Jacque Fresco, considered by many to be a modern day Da Vinci. Peer to Einstein and Buckminster Fuller, Jacque is a self-taught futurist who describes himself most often as a "generalist" or multi-disciplinarian -- a student of many inter-related fields. He is a prolific inventor, having spent his entire life (he is now 97 years old) conceiving of and devising inventions on various scales, which entail the use of innovative technology.

As a futurist, Jacque is not only a conceptualist and a theoretician, but he is also an engineer and a designer.



WATCH TRAILER


THE VENUS PROJECT
BUY IT >

The Monetary System and the United Kingdom

by Andrew Buxton

Prior to 1840 In the UK, there were no laws to stop banks from issuing their own money.

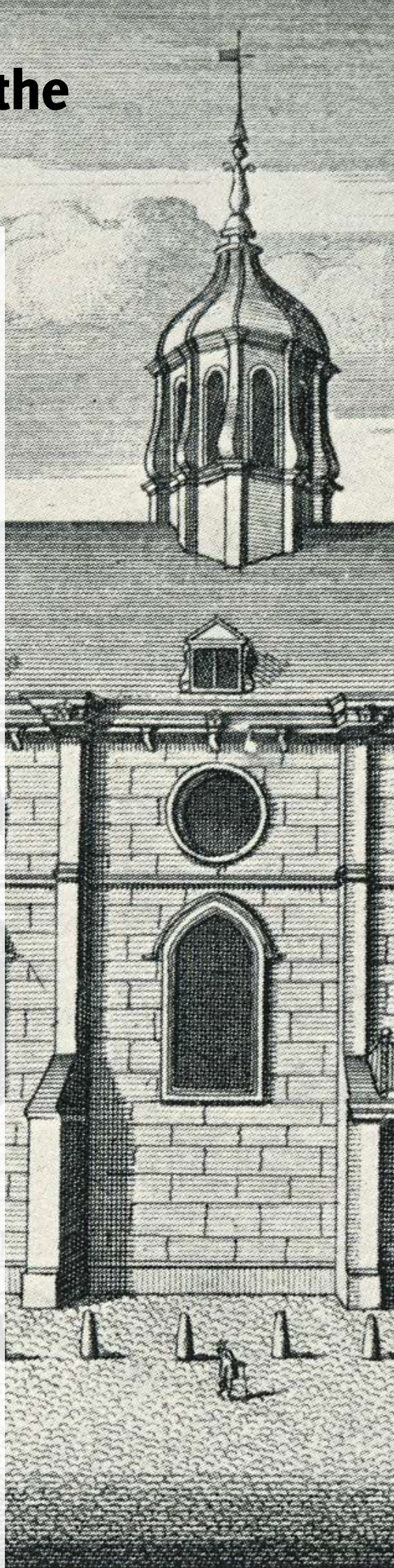
Like many other commercial banks of the time, Fox, Fowler and Company was legally entitled to issue its own banknotes. However, when the Bank Charter Act was passed in 1844, no new banks could issue notes in England and Wales, and the number of note-issuing institutions fell gradually with financial sector consolidation. Fox, Fowler and Company was the last commercial note-issuing bank in England and Wales, until it was bought out by Lloyds Bank in 1921.

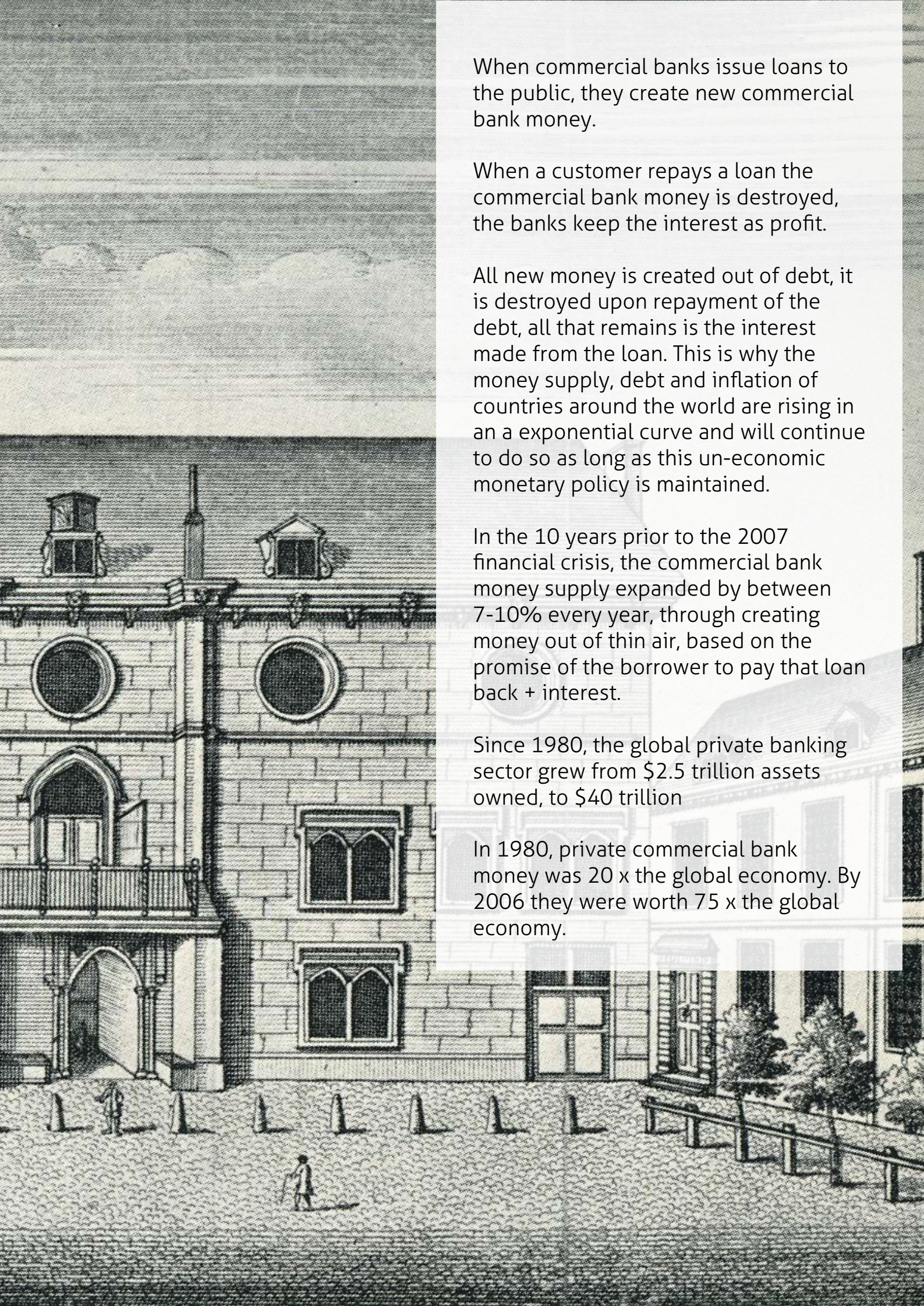
Under the terms of the 1844 act, the bank lost the legal right to issue banknotes upon its merger with Lloyds, and the Bank of England became the sole note-issuing bank in England and Wales.

Some commercial banks in Scotland and Northern Ireland retain the right to issue bank notes, but only the Bank of England may now issue sterling bank notes in England and Wales.

Now however, almost everything has gone digital, and an estimated 97% of the money we use today is nothing but digital numbers that the commercial banks can create out of nothing. Most of the money in circulation today consist of bank demand deposits, that are not legislated as part of the monetary laws passed in 1844.

All money held in bank accounts is an accounting entry, it is simply numbers in a computer system. The money lent to a customer does not exist until the customer signs the repayment agreement. Upon this act the digital commercial bank money is created.





When commercial banks issue loans to the public, they create new commercial bank money.

When a customer repays a loan the commercial bank money is destroyed, the banks keep the interest as profit.

All new money is created out of debt, it is destroyed upon repayment of the debt, all that remains is the interest made from the loan. This is why the money supply, debt and inflation of countries around the world are rising in an a exponential curve and will continue to do so as long as this un-economic monetary policy is maintained.

In the 10 years prior to the 2007 financial crisis, the commercial bank money supply expanded by between 7-10% every year, through creating money out of thin air, based on the promise of the borrower to pay that loan back + interest.

Since 1980, the global private banking sector grew from $2.5 trillion assets owned, to $40 trillion

In 1980, private commercial bank money was 20 x the global economy. By 2006 they were worth 75 x the global economy.

Changing People's Behavior: From Reducing Bullying to Training Scientists

sources:spsp.Org

San Diego, CA, January 26, 2012 – If you want to change how teenagers view bullying, go straight to the source of most school trends: the most connected crowd. According to new intervention research, targeting the most influential students in a school could be a key factor in reducing harassment and bullying.

These results are part of a group of studies that are being presented today at a social psychology conference in San Diego on new, sometimes small ways to make meaningful impacts on people's lives. "This is an exciting time in the field of social psychology," says Timothy Wilson of the University of Virginia, who wrote Redirect: The Surprising New Science of Psychological Change. "Increasingly, researchers are devising theory-based interventions that have dramatic effects in the areas of education, prejudice reduction, adolescent behavior problems, health and many others."

The idea behind such intervention work is to change the behavior for a particular group of individuals. Reducing student bullying, increasing interest among teens in math and science and improving perceptions of women in engineering, are the focus of today's talks in San Diego.

Reducing student bullying

In the bullying intervention study, Elizabeth Levy Paluck and Hana Shepherd of Princeton University, set out at a U.S. public high school to change students' perceptions that harassment of fellow students is a normal way to gain and maintain status.

"We were interested in the idea that harassment and bullying in schools is a social norm that is not necessarily related to students' personal feelings," says Levy Paluck. Her team used social network analysis to identify the students who might have the most influence in setting social norms.

A random subset of these students participated in public denouncements of harassment and bullying. The researchers then tracked the social network over one year, also collecting data on disciplinary records and teacher assessments. Levy Paluck and Shepard found that students who were socially tied to the intervention significantly decreased their perception that harassment and bullying is a desirable norm. At the same time, those students' decreased their harassment and bullying behavior, as measured through disciplinary records, teacher assessments and independent behavioral observations.

Increasing teens' interest in math and science

In a different intervention study aimed at changing teen behavior in math and science, researchers did not target the students themselves but rather their parents. The goal was to increase students' interest in taking courses in science, technology, engineering and mathematics (STEM). "We focus on the potential role of parents in motivating their teens to take more STEM courses, because we feel that they have been an untapped resource," says Judith Harackiewicz of the University of Wisconsin, Madison.

The participants consisted of 188 U.S. high school students and their parents from the longitudinal Wisconsin Study of Families and Work.

Harackiewicz and her colleague Janet Hyde found that a relatively simple intervention aimed at parents – two brochures mailed to parents and a website that all highlight the usefulness of STEM courses – led their children to take on average nearly one semester more of science and mathematics in the last two years of high school, compared with the control group. "Our indirect intervention," funded by the National Science Foundation, "changed the way that parents interacted with their teens, leading to a significant and important change in their teens' course-taking behavior," Harackiewicz says.

Improving perceptions of women engineers

"Many of these interventions work by changing the stories people tell themselves about who they are and why they do what they do, in ways that lead to self-sustaining changes in behavior," says Wilson of the University of Virginia.

For example, new work being presented by Greg Walton of Stanford University tested the effects of two interventions on female engineering students, one aimed at making them feel like they belong in engineering and another at teaching them to reflect on core values to help them cope with stress.

Both interventions improved the first-year grades of women enrolled in male-dominated engineering majors compared to a control group, eliminating a gender gap. The two interventions worked in different ways, however: Women in the belonging group were able to build better relationships with male engineers, while women in the value-training group made more friends outside of engineering, according to the study funded by the Spencer Foundation.

"The two interventions suggest the power of social-psychological approaches to help people cope with settings in which their group is underrepresented and negatively stereotyped," Walton says.

The Exponential Growth of Communications Technology

by Andrew Buxton

It is hard for some to imagine a world without mobile phones, email, Ipods, digital books, and any of the hundreds of technical communication devices in use today. Yet a brief look at the history of communication tells us that all of the current technologies by which we interact with each other globally, have been invented within the last 40 years – at an exceedingly exponential rate. When you look at the developments of the last 50 years, the extent to which technological advancements has transformed our ability to communicate and remove barriers of location and language is amazing.

The earliest known symbolic language is Sumerian, which dates back to around 2900BC, and 1900-years later the first of the alphabetic writings emerged. From here onwards, the number of naturally developing alphabet-based languages expanded at an ever increasing rate. Followed relatively recently with what are known as constructed languages whose phonology, grammar and vocabulary have been consciously devised by an individual or group, instead of having evolved naturally.

For tens of thousands of years, mankind has been unable to communicate effectively on a global level – due to the limitations of differing spoken and written languages. Technology is now breaking down this barrier as can be seen in in the latest developments of automated translation systems such as Google Translate. Even the age-old communication barriers of differing value systems, cultures and beliefs are gradually diminishing due to the Internet, where the sharing of ideas is increasingly open and instantaneous.

Communication is the key to bridging differences between people all over the world and is crucial to any possible sustainable future, where the major problems common to us all such as war, poverty, famine and scarcity are no longer a detriment to the health of our species or the ecosystem that supports us. It is only through the communication of ideas, understandings and relevant information to the well being of all people, that we can begin to outgrow our outdated and irrelevant barriers.

Semantics

It is fundamentally important to apply the most appropriate language in order to avoid misunderstanding. Words express the ideas, which then can materialize and it is important that foundations are laid out in a way that is transparent. Some people contend that it is unnecessary to lay so much stress on the precise expression of our definitions, but we assert that clarity is not only necessary but it is much more efficient in the long-term.

Words are the first tools used by humans and arrived from the need for better communication, just as the need for a more precise use of our language brought about the science of semantics. In everyday life, words, beliefs and ideas become facts. Widely held beliefs - such as that bulls are infuriated by the sight of anything red - are in fact so deeply ingrained in common thought and speech that it may constitute a breach of the peace to question them. Yet questioned it has been, by professors Thomas N. Jenkins and G.H Estabrooks, both of whom maintain that bulls are color blind.

Discrepancies between facts and ideas are greatly responsible for the dividing of modern society into different warring classes and multiply the greater world problems. With stronger efforts and education about communication, we can begin to move towards a world of clarity, reason and safety.

BOOKS RELEVANT TO THIS TOPIC:

> *Tyranny of Words by Stuart Chase*

> *Science & Sanity by Alfred Korzybski*

> *Language in Thought and Action by S.I. Hayakawa*

NEWS

How 3D printing could disrupt the economy of the future

3d printing is becoming more and more mainstream and it is one of the disruptive technologies. The printers are getting more performant and much cheaper. You can buy a decent one for just over $300. As more people can afford one, and such a printer can print anything you can imagine, plus the fact that some can combine different types of materials, combined with open source software which is easy to use, this will empower the individual to become a manufacturer.

The more efficient this technology becomes, the more complex objects that can be produced with it. Therefore, 3D printing will eliminate many jobs in manufacturing and distribution, and even if it will create new ones, it is hard to believe it will cover the job loss created.

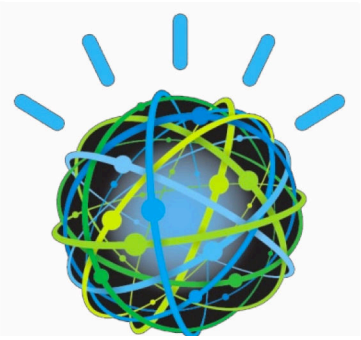
And keep in mind that many 3D printers can replicate 90% of their parts, creating new 3D printers.

read it all >

IBM Watson - The SuperComputer that goes to work in Health-Care

by Tio

Watson is the supercomputer which won Jeopardy against two of the best players in the world. It can understand the complicated human language and human communication, and is now working in healthcare as a consultant: it generates and evaluates evidence-based hypotheses and it adapts and learns from user selections and responses.



Watson can do what humans cannot: deal with huge amounts of data and it already started the work. Watson has made huge strides in its medical prowess in two short years. In May 2011, IBM had already trained Watson to have the knowledge of a second-year medical student. In March 2012, IBM struck a deal with Memorial Sloan Kettering to ingest and analyze tens of thousands of renowned cancer center's patient records and histories, as well as all the publicly available clinical research it could get its hard drives on.

Today, Watson has analyzed 605,000 pieces of medical evidence, 2 million pages of text, 25,000 training cases and has had the assistance of 14,700 clinician hours fine-tuning its decision accuracy. Six "instances" of Watson have already been installed in the last 12 months.

Watson doesn't tell a doctor what to do, it provides several options with degrees of confidence for each, along with the supporting evidence it used to arrive at the optimal treatment. Doctors can enter on an iPad a new bit of information in plain text, such as "my patient has blood in her phlegm," and Watson within half a minute will come back with an entirely different drug regimen that suits the individual.

We can imagine Watson pretty much in any field of knowledge: education, scientific research, as a tourism guide, even in programming - imagine telling Watson what kind of program you would like for your pc or tablet, and he could build one for you by learning programming.

watch watson winning jeopardy > **see how watson works in health care >**

The Internet of Things

In our houses, cars,and factories, we're surrounded by tiny, intelligent devices that capture data about how we live and what we do. Now they are beginning to talk to one another. Soon we'll be able to choreograph them to respond to our needs, solve our problems - even save our lives.

Imagine everything connected to a huge network: from your tv to your smartphone, pc, fridge, heating, doors, microwave oven, even your health - through some sensors. Well, it is already here and it will spread like a virus in the next 5 to 10 years.

The tremendous advantage of such a system is the analyzing of a huge amount of data and arriving at smarter decisions over a multitude of situations. From power consumption, to the commodity of having the technology around you personalized to your needs. From traffic to distribution of goods and services, from monitoring your child's health to sprinklers that could respond to the weather report as well as to historical patterns of soil moisture and rainfall. Connecting such a multitude of devices will create a nervous system of.....well, everything.

There seems to be 3 steps to follow for this technology to grow:

1. The simple act of putting objects on the network—is well under way, spurred by a few different economic forces. For makers of consumer devices, one way to escape the trap of commodification is to put a device (e.g. an alarm clock, refrigerator or fitness tracker) on the network and call it "smart."

2. The yoking together of two or more smart objects is tricky because it represents the vertiginous shift from analysis, the mere harvesting of helpful data, to real automation. This is a leap that tries our nerves: No matter how thoroughly we might use data to fine-tune our lives and businesses, it's scary to take any of those decisions out of human hands. But it's also a challenge to our imagination. In a non-programmable world, when few objects are connected, it can be tough to grasp how even pairs of things might naturally fit together.

3. To build applications on top of these connected objects. This means not just tying together the behavior of two or more objects—like the sprinkler and the moisture sensor—but creating complex interrelationships that also tie in outside data sources and analytics.

There are already companies which are harnessing this idea and if you look from a distance at what it intends to create, it is automation of a new dimension: basically automating almost anything you can imagine and free-up people from worrying about most of the mundane things.

read it all >

Technological wonders of the month:

- **Bioteeth From Stem-Cells Will Regrow Complete Teeth, Superior to Implants**
- **Google and NASA Launch Quantum Computing AI Lab**
- **Pilotless passenger planes prepare for take-off**
- **Solar Panels as Inexpensive as Paint?**
- **Anti-CD47 antibody may offer new route to successful cancer vaccination**
- **Autonomous Robot Comprehends Objects On Its Own**

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