A summary of the events at the World Science Festival 9th March to 13th March http://www.worldsciencefestival.com.au/program/program/program-listing/

			Wednesday 9 th March
Session	Where	Time	Торіс
Mind Vs Machine: What	Cinema A GOMA	20:00-22:00	The Matrix 1999 M
Makes us Human?		\$10.50/\$8.50	'Thomas A. Anderson (Keanu Reeves) lives a dual life: by day a computer programmer and by night a hacker named Neo. He is contacted by legendary hacker Morpheus, who reveals that the world is actually a ravaged
The Matrix			wasteland run by a race of machines; and people live within their own minds in an artificial reality known as The Matrix.
Mind Vs Machine: What	Cinema A Goma	18:00-20:00	Ex Machina 2015 MA15+
Makes us Human?		\$10.50/\$8.50	'Caleb Smith (Domhnall Gleeson), a programmer at an internet-search giant, wins a competition to spend a week at the private mountain estate of the company's brilliant and reclusive CEO, Nathan Bateman (Oscar Isaac).
Ex Machina			Upon his arrival, Caleb learns that Nathan has chosen him to be the human component in a Turing Test—charging him with evaluating the capabilities, and ultimately the consciousness, of Nathan's latest experiment in
			artificial intelligence.
Light Falls: Space, Time and	Playhouse QPAC	8-9:30 pm	Celebrating the 100th anniversary of Einstein's discovery of the general theory of relativity, this original work weaves together dramatic portrayals, state-of-the-art animation and innovative projection techniques to trace
an Obsession of Einstein		\$89/\$69	Einstein's electrifying journey toward one of the most beautiful ideas ever conceived.
			Brian Greene and an ensemble cast tells the dramatic story of the breakthrough moments, near misses, agonizing frustrations, and emergence into the light, as one intrepid mind took on the universeand won.
		,	Thursday 10 th March
Session	Where	Time	Topic
Cool Jobs	Courier Mail Plaza	10:00-11:00	Meet people with Cool Jobs and explore the science behind their work. The 'office' may be anywhere from a fossil dig, unearthing creatures unseen for millions of years, to a pyrotechnic movie set or even a kitchen at a zoo
	South Bank Parklands	\$10	preparing lunch for lemurs.
			World Science Festival Brisbane introduces you to people behind some of the coolest jobs – to hear their stories, ask them questions and inspire the next generation of scientists.
Last Days of Mephisto-	Queensland Museum	15:30-16:30	Commonly known as "the Mephisto," this German tank is the only remaining A7V Sturmpanzerwagon from World War 1.
Forensic and Balistic		Free	Many people already know Mephisto from encounters at the Queensland Museum as a child but few have experienced the tank from the inside. Even fewer know its ballistic history or have followed its story while trying to
Science			solve the mystery behind what happened leading up to its retrieval by Australian troops in July 1918.
			Join PHD Candidate Mr Chris Little as he shares the latest developments in advanced 3D scanning technology to create an accurate three dimensional model of the Mephisto tank.
-1	+ 1500 L		This 3D data also provides forensic experts useful information for ballistic analysis, perhaps bridging the gap surrounding questions of what caused the Mephisto's battle scars in Villers-Bretonneux.
Playing for Time: Music	Griffith University	18:00-19:30	Neurologist, Oliver Sacks, suggested, "It really is a very odd business that all of us, to varying degrees, have music in our heads."
and Memory	Conservatorium	\$30/\$20	It's no secret that good music makes us feel good but can music be more effective than a pill in treating a range of neurological conditions? Can our life play-list of nursery rhymes, schoolyard chants and favourite songs
			influence our brain function? A small but growing body of scientific evidence suggests that music and other forms of rhythmic stimuli can connect with the brain in predictable ways and even improve damaged brains. With the exponential growth of an ageing population, it offers hope for those with dementia, depression, and other age- related brain disorders, that music can provoke a more connected and human experience
			and an increase in cognitive ability.
Madness Redefined:	Plaza Auditorium	20:00-21:30	ariu an increase in cognitive auting. Virginia Woolf, John Keats, Emily Dickinson, Edgar Allen Poe—teetering on the thin line between madness and genius, they contributed to the world some of the greatest works of literature at the cost of their own mental
Creativity, Intelligence and	Convention and	\$30/\$25	vitality. Even they suspected a link between the moments of crystal clear lucidity amongst their disordered emotions. Now science is proving them right.
the Dark Side of the Mind	Exhibition Centre	\$30/\$23	Research shows that bipolar disorder and schizophrenia correlate with high creativity and intelligence, raising tantalizing questions: What role does environment play in the path to mental illness? Are so-called mental
the bark side of the Willia	Exhibition centre		defects being positively selected for in the gene pool? Where's the line between gift and disorder?
			As studies mount supporting the storied link between special aptitudes and mental illnesses, science is reexamining the shifting spectrum between brilliance and madness.
Chasing Down the Comet	Griffith University	12:30-14:00	Ten years is a long time to ask 'are we there yet?' in 2004, the European Space Agency launched the robotic space probe, Rosetta, on an incredible 11.4 billion kilometre journey chasing down the 67P/Churyumov—
	Conservatorium	\$30/\$25	Gerasimenko comet.
			It travelled through space at almost 40,000 kilometres per hour and scientists compared the task of landing it on a comet to a fly trying to land on a speeding bullet.
			Experience the excitement, trials and tribulations of what is considered the most complex space mission ever attempted as we explore what can be learnt from this extraordinary mission.
			Will the comet's water molecules help us to find proof of where our oceans originated? Could the journey help us to understand the history of the solar system itself?
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		,	Friday 11 th March
Session	Where	Time	Topic
Green Heart Schools	Reddacliffe Place,	9:30-11:00	Calling all young inventors! We need you to help secure Brisbane's water future. Green Heart Schools invites Brisbane's year 7 students to the Future BNE event on Friday 11 March 2016. Excitement will flood as you
	George St, Brisbane	Free	channel your best innovative ideas, critically evaluate water use and battle other schools to discover how science, technology and art can work to build a better future.
Cool Jobs	Courier Mail Plaza	10:00-11:00	Meet people with Cool Jobs and explore the science behind their work. The 'office' may be anywhere from a fossil dig, unearthing creatures unseen for millions of years, to a pyrotechnic movie set or even a kitchen at a zoo
	South Bank Parklands	\$10	preparing lunch for lemurs.
2 16 1 21 1 2 2	DI A 111 1	0.45.40.00	World Science Festival Brisbane introduces you to people behind some of the coolest jobs – to hear their stories, ask them questions and inspire the next generation of scientists.
Breakfast with the Brians	Plaza Auditorium Convention and	8:15-10:00 \$55/\$50	In a breakfast event that promises to be as entertaining as it is thought provoking, Australia's Nobel Prize winning astrophysicist (and successful winery owner), Brian Schmidt, meets internationally renowned string theorist and best-selling author, Brian Greene (think The Elegant Universe and Big Bang Theory).
	Exhibition Centre	\$33/\$30	and best-selling author, prind ordering (units the diegard Oniverse and log badig rheory). A light breakfast will be served in the fover at 8:30am followed by the discussion in the Plaza Auditorium at 9am.
Dear Albert	Playhouse QPAC	20:00-21:30	A fight dreamast will be served in the loyer at 6:50am followed by the discussion in the Praza Auditorium at 43am. Dear Albert, written by Alan Alda eldes into Albert Einstein's personal correspondence, tracing an intimate and unfamiliar line across his life and work.
Deal Albert	riayilouse QFAC	\$60/\$50	Unquestionably one of the greatest – if not the greatest – minds of the 20 th century, Einstein was as celebrated for his wit as for his Theory of Relativity.
		300/330	The reading humanises a giant in the partheon of great scientists and sheds light upon his momentous scientific insights through first-hand accounts of ground breaking discoveries.
To Infinity and Beyond: The	Plaza Auditorium	11:30-13:00	It's modern cosmology's biggest mystery – an unexplained energy that one day could rip the universe apart. It's called dark energy, an anti-gravitational force that confounds the conventional laws of physics. It's the most
Accelerating Universe	Convention and	\$30/\$25	dominant substance in our universe, comprising nearly two-thirds of the cosmos.
3	Exhibition Centre	,	And yet, two decades after its discovery, science is still grappling for an explanation of what dark energy actually is.
			With today's top astrophysicists as our guides, we'll journey to the earliest moments of the universe – and far into the future – in search of clues to cosmology's most vexing puzzle.
Can We Save Our Precious	Griffith University	12:30-14:00	The world's reefs are in a dramatic state of decline – over 50% of corals have been lost over the last 30 years due to pollution, destructive fishing practices, ocean warming and ocean acidification resulting from rising
Reefs in Time	Conservatorium	\$30/\$25	concentrations of greenhouse gases in the atmosphere.
		,, .	According to the scientific community the decline is set to continue, and if so, will affect 500 million people globally who rely on coral reefs for food, income, and coastal protection.
			Have we lost the battle or is there still a chance to preserve and protect these amazing global assets?
			Revolutionary science might be able to exponentially increase the speed of mapping and analysis to help us understand what is happening to our reefs when and where. Does global approach to one of Australia's icons
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			mean that we could get to a solution in time?
Great Moments in Science	Plaza Auditorium	17:00-18:00	The art that we could get to a solution in time? What makes you forget why you entered a room? Why is it safer for a cat to fall from 32 stories than from seven? Are bananas really slippery, radioactive and loaded with potassium?
with Dr Karl	Convention and	\$20/\$18	what makes you longer why you entered a footh? Why is it saler for a cat to fail from \$2 stories than from seven? Are balantas really supperly, radioactive and loaded with potassium? Join Australia's science legend Dr Karl for a whitnlyind tour of scientific explanations and bizarre facts.
WILLI DI KALI	Exhibition Centre	320/310	Find out how photos of eyes make you honest, why the phrase 'sinister buttocks' gets into students' essays, and what the 'big cover up' is on kissing.
	Exhibition Centre		Come and laugh and learn.
Café Scientifique: Infinite	Collectors Café,	17:30-20:30	Infinite Blue – The Future is Bright
Blue-The Future is Bright	Queensland Museum		How can we contemplate a bright future for our oceans in the light of such condemning evidence? What kind of people will come up with a solution?
ū			Immerse yourself in an underwater vision and soundscape as you shift from passive audience member to problem solver in our Café Scientifique event Infinite Blue – The Future is Bright.
			This is an 18+ event, ticket price includes one beverage. Café Scientifique is an event which anyone can attend to explore the latest ideas in science and technology.
Mind Vs Machine: What	Cinema A, GOMA	18:00-20:00	eXistenZ 1999 M
Makes Us Human?		\$10.50/\$8.50	"Dark, delirious fun" (Geoff Andrew, Time Out), Cronenberg's mind-warping virtual-reality adventure is set in a near future where video gamers have bio-ports surgically implanted in their spinal columns in order to plug
eXistenZ			themselves directly into organic gaming pods.
Mind Vs Machine: What	Cinema A, GOMA	19:45-21:30	Her 2013 MA15+
Makes Us Human? Her		\$10.50/\$8.50	'Set in Los Angeles in the slight future, Her follows Theodore (Joaquin Phoenix), a complex soulful man who makes his living writing touching, personal letters for other people.
			Heartbroken after the end of a long relationship, he becomes intrigued with a new, advanced operating system, which promises to be an intuitive and unique entity in its own right. Upon initiating it, he is delighted to mee
			'Samantha', a bright female voice (Scarlett Johansson) who is insightful, sensitive and surprisingly funny.
Dear Albert	Playhouse QPAC	20:00-21:30	Dear Albert, written by Alan Alda delves into Albert Einstein's personal correspondence, tracing an intimate and unfamiliar line across his life and work.
		\$60/\$50	Unquestionably one of the greatest – if not the greatest – minds of the 20 th century, Einstein was as celebrated for his wit as for his Theory of Relativity.
			The reading humanises a giant in the pantheon of great scientists and sheds light upon his momentous scientific insights through first-hand accounts of ground breaking discoveries.
			Saturday 12 th March
Session	Where	Time	Topic
Biolumination	Queensland Museum	9:30-16:00	Germs + bacteria = nasty?
		Free	At the World Science Festival Brisbane they spell beautiful glowing artworks. For a fresh look at germs and bacteria, take one artist and add a cotton swab, glowing bacteria and giant Petri dishes. The result a masterpiece of
			Biolumination.
Flatback Turtle Hatching	Queensland Museum	9:30-16:00	Learn more about the amazing Flatback Turtle! Eggs of the Flatback Turtle, an endemic Australian species, will be incubated at the Queensland Museum with the hatchlings timed to emerge during the World Science
		Free	Festival. Our Reptile Curator, Patrick Couper, will be on hand to oversee this project which is designed and supervised by Dr Colin Limpus, an internationally renowned turtle biologist.
			Following the Festival, most of the hatchlings will be transported to Yeppoon and released offshore. The remaining hatchlings will be taken to Underwater World, on the Sunshine coast, where they will be fitted with
			transmitters. This will enable scientists to track their movements when they are later released.
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			The reading humanises a giant in the pantheon of great scientists and sheds light upon his momentous scientific insights through first-hand accounts of ground breaking discoveries.
On a wing	Queensland Museum	9:30-16:00	Everybody knows that birds have feathers and fly but did you know that they can sing, imitate, walk, run, swim, and dive and can be found in the air, oceans, shorelines, rainforests, deserts and even polar regions.
		Free	Migratory shore birds feed in Australia during our summer and then travel thousands of kilometres across Asia to breed in the northern summer in Siberia and Alaska. Associate Professor Richard Fuller from the University
Danie Basina	BSHS	10.00 16.00	of Queensland will be attaching trackers to some of these remarkable creatures to track the Australasian flyway of their migration.
Drone Racing	R2H2	10:00-16:00 Free	The QAROP Australia Drone Challenge is pitting Australia's best drone pilots against each other in a battle to the finish, overcoming never before seen aerial challenges to complete the gruelling circuit race. Witness the
Street Science	Cultural Forecourt	10:00-16:00	action throughout the day on the basketball court of Brisbane State High School. This free, two-day extravaganza will showcase the pure fun of science through a non-stop program of hands-on, full-on science in action. Science-inspired food and culinary demonstrations will explain the chemical
Street Science	South Bank Parklands	Free	This free, two-day extraveganza with sinowcase the pure furth of science through a non-stop program or nanos-on, furth-or science in action. Science-inspired root and culturally demonstrations will explain the chemical reactions on your plate while you mingle with robots, admire art inspired by bioluminesort bacteria. Street Science! will be loud, messy, high energy, delicious, interactive andunforgettable.
Atomic Kids! Morning	Queensland Museum	10:30-12:00	In this hands-on workshop, students discover atoms and molecules – the tiny building blocks of everything around us. They will explore and physically feel different elements including gold, zinc, carbon, hydrogen and
Workshop	Queensianu iviuseum	Free for	In this haddern workshop, students students and molecules—the time building about us. They will explore and physically refer universely, construct models of molecules, devise their own chemical formulas, discover what makes certain chemicals react, get hands-on with
vvorksnop		accompanying	chemical reactions and watch some chemicals explode in front of their very eyes.
		adults \$10 kids	Explore the microscopic world of atoms. The everyday world that we can see and touch, is connected to an invisible microscopic world of astonishingly small atoms. Atomic Theory explores this microscopic world.
			Atomic Theory is seen by many as science's biggest idea and is the key concept that unlocks the rest of the sciences. It is based around the notion that all matter is made up of tiny invisible particles known as atoms
			Everyone, including primary school students, can understand Atomic Theory. If learnt early, this understanding can give your child a head start in their science education.
			Australian scientists have made discoveries that have changed the world – now it's time to inspire our next generation! Suitable for ages 9 -12.
Where Worlds Collide:	Griffith University	12:00-13:30	Science knows no boundaries. The scientific interventions that are now being discussed with the human condition from cradle to grave cause our value systems to bend and flex like never before.
Science, Values and Ethics	Conservatorium	\$30/\$25	From the possibilities of human reproductive cloning to a human life expectancy of 150 or more years, the boundaries of whether we 'can' become confused with whether we 'should'
			Should we allow chemically enhanced performance on the sporting field and in the classroom?
			Should we use deep brain stimulation to treat intractable depression, obesity and addiction? These are the quandaries of intersecting issues in science, values and ethics.
Dawn of the Human Age	Plaza Auditorium	12:00-13:30	Mankind is a master of invention. For millennia, we've reshaped the land, dammed the waters, and conjured towering meccas of civilization. We've overcome the limits of Nature, reimagining the World as we'd like it to be
	Convention and	\$30/\$25	In our success, some argue Man has become a force of Nature unto itself – one on par with meteor strikes or earthquakes. That's the question before an international and multidisciplinary team of scientists as the
	Exhibition Centre		consider the dawn of a new geological epoch: the Human Age.
			Declaring this new age will require a clear marker – or 'golden spike' – in the Earth's strata, one denoting the point when Man forever changed our planet.
			Indelible scars caused by fossil fuel extraction, for example, or the layer of radiation that lingers in the wake of the first atomic bomb.
		ļ	In this program, geologists, paleontologists, oceanographers and climatologists gather to explore evidence for the Human Age – and what the implications might be as we imagine the future of our planet.
Atomic Kids! Afternoon	Queensland Museum	13:00-14:30	In this hands-on workshop, students discover atoms and molecules – the tiny building blocks of everything around us. They will explore and physically feel different elements including gold, zinc, carbon, hydrogen and
Workshop		ĺ	helium, interpret the Periodic Table (which is a kind of alphabet of the universe), construct models of molecules, devise their own chemical formulas, discover what makes certain chemicals react, get hands-on with
		ĺ	chemical reactions and watch some chemicals explode in front of their very eyes.
		ĺ	Explore the microscopic world of atoms.
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	+ 150-1 · · · ·		Australian scientists have made discoveries that have changed the world – now it's time to inspire our next generation! Suitable for children aged 9-12.
Going with the Flow: The	Griffith University	16:00-17:30	The Antarctic is one of the coldest places on the planet yet is central to one of the hottest topics in climate research.

Changing Shape of Sea Ice	Conservatorium	\$30/\$25	Paradoxically the sea ice in the Antarctic is increasing in size despite its northern counterpart the Arctic which is experiencing dramatic decreases.
Changing shape of Sea ice	Conservatorium	\$30/\$23	It's not just the size of the sea ice that's changing each year but the increasing seasonal unpredictability of the thickness and importantly the arrival of the ice that is of concern.
			With only 36 years of satellite data to study, glaciologists have turned to drones and torpedoes to may the ice from above and below. Combined with ancient ice core research, what they have discovered shows there is
			more to climate change than temperature alone.
Café Scientifique:	Collectors Café.	17:30-20:30	Cafe Scientifique: Creatures That Can Kill You
Creatures That Can Kill You	Queensland Museum	\$25/22.50	Immerse yourself in the dangerous and thrilling world of the Australian fauna through cutting edge scientific investigations.
		,	Witness a showcase of science and exciting digital interpretations over a beverage as we explore creatures that can kill you over one electrifying night.
			This is an 18+ event, ticket price includes one beverage. Café Scientifique is an event which anyone can attend to explore the latest ideas in science and technology.
Reality Since Einstein	Plaza Auditorium	20:00-21:30	Never has a scientist captured the world's imagination like Albert Einstein. His disheveled hair and mischievous grin are instantly recognizable to children and adults the world over.
•	Convention and	\$30/25	But it was his revolutionary concept of gravity that opened our eyes to the true nature of the universe.
	Exhibition Centre		Fresh off the 100th Anniversary of Einstein's Theory of Relativity, we examine its essential insights, the lingering questions that remain unanswered, the latest work fuelled by the theory, and the allied fields of research that
			have resulted from it.
			World-renowned leaders in theoretical physics, cosmology, black holes and unification will discuss Einstein's ten-year odyssey and the ideas and discoveries that it has generated.
		1	Sunday 13 th March
Session	Where	Time	Торіс
Biolumination	Queensland Museum	9:30-16:00	Germs + bacteria = nasty?
		Free	At the World Science Festival Brisbane they spell beautiful glowing artworks. For a fresh look at germs and bacteria, take one artist and add a cotton swab, glowing bacteria and giant Petri dishes. The result a masterpiece of
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Street Science	Cultural Forecourt	10:00-16:00	This free, two-day extravaganza will showcase the pure fun of science through a non-stop program of hands-on, full-on science in action. Science-inspired food and culinary demonstrations will explain the chemical
	South Bank Parklands	Free	reactions on your plate while you mingle with robots, admire art inspired by bioluminescent bacteria. Street Science! will be loud, messy, high energy, delicious, interactive andunforgettable.
Atomic Kids: Morning	Queensland Museum	10:30-12:00	In this hands-on workshop, students discover atoms and molecules – the tiny building blocks of everything around us. They will explore and physically feel different elements including gold, zinc, carbon, hydrogen and
Workshop		Free for	helium, interpret the Periodic Table (which is a kind of alphabet of the universe), construct models of molecules, devise their own chemical formulas, discover what makes certain chemicals react, get hands-on with
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			Australian scientists have made discoveries that have changed the world – now it's time to inspire our next generation! Suitable for ages 9 -12.
The Moral Math of Robots	Plaza Auditorium	16:00-17:30	Can machines learn right from wrong? As the first generation of driverless cars and battlefield warbots filter into society, scientists are working to develop moral decision-making skills in robots. Break or swerve? Shoot or
	Convention and	\$30/\$20	stand down?
	Exhibition Centre		These decisions may be based on algorithms created with a defined set of parameters — the international laws of war, for example. Or they might be influenced by 'ethical adapters,' programs that simulate human
			emotions like guilt and shame.
			It may even be possible for intelligent machines to develop a moral framework through accumulated experience, much like a child does. But as 'ethical robotic software' proliferates, who will be responsible for those
			decisions? What other emotions might robots acquire? And how will society adapt to machines that appear — and yet aren't quite — human? We'll tackle these and other questions as the leading neuroscientists, roboticists, philosophers, and computer scientists take us inside the emerging field of robot morality.
Alien Life: Will we know	Plaza Auditorium	12:00-13:30	we in tacket triese and other questions as the leading neuroscientists, roboticists, prinosophiers, and computer scientists date is misied the enlieging neuroscientist as the reading neuroscientists are reading neuroscientists as the reading neuroscientists are reading neuroscientists. Are we allowed in the universe? Scientists haven't found aliens yet, but by scientists when that our galaxy harbors billions of planets, many of which may have conditions similar to those on Earth. Mars is just
when we find it?	Convention and	\$30/\$25	Are we addict in the universet scientists haven't round after size, but by scanning the sky they we shown that our galaxy harders on planets, many or which may have conditions similar to those on Earth. Mars is just one example.
when we find it:	Exhibition Centre	730/723	According to NASA, this desert world was once more hospitable, and could perhaps harbor life today. All these discoveries cause us to ask: When searching for life beyond our home planet, do we know what to look for?
	Exhibition centre		What human prejudices might cause us to overlook life that is very different from what we expect? Whether searching for signs of alien microbes or listening for signs form an advanced civilization, these are the questions
			that nag and inspire.
			Learn how scientists across disciplines — astronomy, physics, chemistry and astrobiology — are combining their knowledge about life on Earth to reach a more comprehensive strategy for identifying life beyond.
Atomic Kids! Afternoon	Queensland Museum	13:00-14:30	In this hands-on workshop, students discover atoms and molecules – the tiny building blocks of everything around us. They will explore and physically feel different elements including gold, zinc, carbon, hydrogen and
workshop			helium, interpret the Periodic Table (which is a kind of alphabet of the universe), construct models of molecules, devise their own chemical formulas, discover what makes certain chemicals react, get hands-on with
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Mind Vs Machine: What	Cinema A, GOMA	15:00-17:00	Blade Runner [The Final Cut] 1982 M
Makes Us Human? Blade		\$10.50/\$8.50	'In a decaying, hi-tech Los Angeles of 2019, a former cop is charged with terminating a group of renegade "skin jobs" — genetically engineered androids who have returned to earth from the colonies they were sent to
Runner			serve.
Catching up with the	Griffith University	16:00-17:30	We assume more complex human societies began living together in close proximity as a means of protection against marauding armies. It was quickly determined, though, that denser populations meant greater access to
Jetsons: Cities in 2050	Conservatorium	\$30/\$25	all kinds of other economic and social benefits.
			The scale of cities proved that bigger, was indeed, better. Have we reached a tipping point in the 21st Century – an era of megacities and world cities – where the disadvantages of huge, sprawling, land-based metropolises
			are starting to outweigh the advantages? In this discussion, scientists, economists, urban planners, futurists and technology entrepreneurs consider the future of the city and identify possible alternatives, once thought the domain of science fiction and cartoons.