



PENDING SECOND REVIEW STRAINS POLITICAL AND ECONOMIC PROBLEMS

businessfile

JANUARY-FEBRUARY-MARCH 2017 | No 109 | € 5.00

www.economia.gr

Changing times Who will survive?



EXCLUSIVE INTERVIEWS

> MIGRATION

Commissioner Dimitris Avramopoulos explains the challenges on migration crisis and the EU policies to help Greek authorities



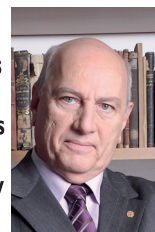
> CURRENT CRISIS

Costas Gavras stresses the need to overturn the negative picture of the wider public opinion on Greece



> TECHNOLOGY

Professor Christos Zerefos explains his method of measuring climate changes through art and insists on clear energy technology



> ART

Playwright Alexi Kaye Campbell talks about "Villa Thalia" and hopes that the present sufferings will have a happy ending



> ANALYSIS

■ Tassos Giannitsis and Stavros Zografakis on present economic and social collapse

■ Gikas Hardouvelis and Ioannis Gkionis on Greece-Cyprus experience in crisis

ISSN 1109-1592



9 771109 159005 02

IMO 8th City of London Biennial Meeting on World Economy, Banking & Finance

Striving for stability in a highly uncertain world

In a changing world, Europe is in a difficult situation, with low growth, high unemployment in the South and populist Eurosceptic parties in the rise

Business File reports

The 8th City of London Biennial Meeting took place last November in the impressive background of the UN-inspired International Maritime Organisation's headquarters by the Thames in London.

The conference is the inspiration and brainchild of **Professor Costas Grammenos**, the renowned and highly respected director of his eponymous Centre for Shipping Trade and Finance at the Cass Business School and City, University of London. Professor Grammenos gathered a diverse forum of distinguished business leaders, policy makers, economists and academics from the worlds of shipping, finance and banking, to share their views on the very pertinent topic of striving for stability in a highly uncertain world.

The conference was held over two days, with the first day devoted primarily to discussions on the world economy and the outlook in banking and finance.

Ten days before the conference Donald Trump had been elected US President and this was an added feature to

the uncertainty factor. The issues faced have been the impact of globalisation, new political climates, Brexit, proposed protectionist measures in the USA as well as upcoming elections in France, Germany and the Netherlands, together with the geo-political shifts in the Middle East with Syria, the relations between the West, Russia and China, the

'In an uncertain, unstable world, shipping will always be a constant.

Even in these challenging times, the world will always rely on shipping, especially since populations increase and so do their demands'
Efthymios Mitropoulos

situation in the Ukraine and South China Sea, conflicts in Venezuela and Africa. **Mr Mitropoulos** stressed that the global nature of shipping "will swing



Professor Costas Grammenos, director of the Centre for Shipping Trade and Finance at the Cass Business School and City, University of London

which way the pendulum swings" and that in an uncertain, unstable world, shipping will always be a constant. Even in these challenging times, the world will always rely on shipping, especially since populations increase and so do their demands. **Mr Mitropoulos** felt that the "omens were good" after the adversity of eight years and that "big changes bring new chapters."

Sir Win Bischoff reiterated that view, that we are living in a "time of revolution, both intellectual and in society",



Efthymios Mitropoulos, Secretary-General Emeritus of the IMO and Chairman of the Maria Tsakos Foundation

especially in the way citizens view institutions, governments and corporations, as well as questioning inequalities, which have led to unexpected political upheaval – namely Brexit and the Trump vote. The consequences of globalisation are blamed, as well as increasing immigration and the lack of jobs. Technology (and its role) has also added to this uncertainty and society needs to reevaluate its response regarding these issues and their implications, which will be highly relevant in the future for all of us.

One answer to this question is the way businesses can optimise technology and consolidate digital and traditional working practices. **Charles Baden-Fuller**, Professor of Strategy at Cass-City University, demonstrated that this shift in combining digital with old world economy is already operational in services like Amazon and also manufacturing industries, such as Rolls Royce.

*Rolls Royce added value to their existing products by adding chips or a monitor to their engines, enabling them to sell power by the hour, making it very cost-effective for their users. By digitally enabling their products they can supply the full service, including the solution to breakdowns, rather than selling engines and service operations separately; it then becomes a much more efficient all-in-one process.

*Amazon is another example which combines online selling with traditional supplying and warehousing. However, Amazon also controls the customer, is in charge of sellers' profit and the supply chain, as well as being a "matchmaking" platform. This consolidated approach will eventually creep into all sectors.

However, Drewry Shipping Consultants' **Arjun Batra** warned that the human element will become less important and that the unavoidable consequence will be that technology will replace labour and that in time middle-management will become more obsolete.

Yet, he feels that certain industries such as real-estate will not be as affected, but inevitably production will become more high-tech, with the expansion of 3-D printing and miniaturisation processes.

Will the global economy grow in 2017?

Lord Griffiths, Vice-Chairman of Goldman Sachs, issued the clarion call that the "global economy is tired on quantitative easing and it needs a real shake up and re-invigoration."

His Goldman's colleague and their chief European economist **Huw Pill** asserts that no matter how "tired" the global economy is on the QE purchase programme, combined with lower interest rates, there has been a significant rise in asset prices and a small revival in growth. Conversely, assurance monitor programmes indicate that wages and retail product prices have not risen.

'We are living in a "time of revolution, both intellectual and in society", especially in the way citizens view institutions, governments and corporations, as well as questioning inequalities, which have led to unexpected political upheaval – namely Brexit and the Trump vote'
Sir Win Bischoff

Mr Pill is cautiously positive with the outlook, backed by new forecasts indicating an increase of 3%-3.5% accelerated period of global economic growth, with the USA doing the heavy lifting. Nevertheless, turbulence is to be expected since the big story is that the USA consistently disappoints, with a tepid to anaemic recovery of around 1.5%-2.5% growth, the weakest since the Great Depression.

Donald Trump is certainly an unknown quantity and realistically he will probably renege on most of his more outlandish electoral promises, but there will be some dimension to some of them: his infrastructure expenditure, lowering taxes and implementing protectionist policies; these are expected to bring about short-term lower growth.

As we had seen with the shockwaves in the markets after the unexpected Trump win, it is generally viewed as "a blip", proving once again that the economy and investments can be wrong. It is largely predicted that a Trump presidency will be re-inflationary, with US hyper-inflation forecast at around 2%-2.5%. Higher inflation will have an impact on global economy in the short-term and it is expected that emerging markets will suffer.

This will be seen in China, since it is exposed to the US economy and it has also implemented its own policy stimulation, which has had a smaller effect than expected. In this respect, the Chinese economy will slow down to a more sustainable 4%.

Stavroula Betsakou, Head of Tanker Research at Howe Robinson Partners, anticipates that there will be a credit bubble in China, as its citizens produce more goods locally, especially in the technology sector. However, raw materials such as oil, coal, gas, and sugar will still need to be imported into China.

In Japan, with the depreciation of the yen, the Governor of the Bank of Japan **Harohiko Kuroda** capped the Euro/Yen exchange rate movement in October 2016; however, re-inflation is too little, too late and makes any recovery in the already declined Japanese economy more uncertain.

All in all, global trade has not slowed down but has stagnated; according to **Huw Pill**, this is temporary, since weak economic growth signifies that global trade is also weak. The impact on shipping voiced by **Arjun Batra** of Drewry Shipping Consultants was that if interest rates do not rise, then trade cannot be expected to grow, thus extending the depressed shipping cycle.

Economist Professor **Vicky Pryce** does not share the Goldman Sachs executives'

view, since trade figures fell in 2016; they moved more slowly than the economy, which means the world is in recession.

The backdrop to this worrying trend is the tumultuous political climate, coupled with inward-looking nationalism and anti-trade protectionist talk. **Professor Pryce** asserts that this is a serious issue since “general and liberal trade contribute 70% to the economies of G20 countries, yet restrictive and protectionist measures among G20 countries reached a new high between October 2015 and May 2016.”

‘Europe is in a difficult situation; the fiscal economy is not sustainable, especially with the ECB continuing to buy debt, which has effectively destroyed southern Europe and these policies have, in turn, encouraged political tensions’
Huw Pill

Amir Alizadeh, Professor of Shipping Economics & Finance at Cass-City University, predicted that there will be “a key change in globalisation to regionalisation” and that the economic environment is being replaced by regionalisation, meaning that the supply chain will be shorter between countries and more localised, which will have an impact on the transportation and shipping industries.

Trump will trump the world economy?

Goldman Sachs’ **Lord Griffiths** admitted that the “Trump administration is a risk, but he has a vision of business which will supply a full economic and fiscal policy, injected with vitality but with caution too.” He outlined two positives: Trump’s fiscal policy in infrastructure, defence spending and lower taxation, plus the shift in policy to supply side economics, deregulation and this move changes incentive.

The key issue for **Lord Griffiths** is not to take Trump’s rhetoric literally and that “his politics are visceral and instinctive and not intellectual.” Trump also has the advantage that US GDP is higher than in 2008. **Lord Griffiths** also

pointed out that any concerns regarding debt and trade are decisions which need approval from Congress.

As Trump is an astute businessman, **Lord Griffiths** feels that it will not be worth it for him to ignore Chinese trade – and as China produces cheap steel, Trump should allow the US to buy it, since they cannot compete in that area. It would be preferable for Trump to spend resources on education and retraining of the younger generation in the rust-belt states to give them a future.

There is also renewed direction in energy with an emphasis on gas and coal production, which have been out of favour for years; Trump’s keenness for fossil fuels will mean an increase in demand.

Stavroula Betsakou of Howe Robinson Partners pointed out that Trump’s influence regarding oil and gas could be mixed, since higher US production of shale could be negative and create a domino effect in oil prices and in relations with oil-producing countries. She also voiced concern at the possibility that Trump could reinstate Iranian sanctions, which will lower investment in Iran just as it was turning its economy around, although she thought it unlikely he will gain EU support for such action.

Professor **Vicky Pryce** is also not optimistic about the impact of the Trump administration, especially his “post-truth environment and post-truth economics”. She found the proposed tearing up of trade treaties such as TTIP (between the US and EU) and TPP (Trans-Pacific nations and the USA) objectionable and regressive.

‘The European economy is not doing well with a 1.5% growth and unemployment rates at worrying levels in Greece, Portugal, Italy, Ireland and Spain’
Vicky Pryce

Arjun Batra, MD of Drewry Shipping Consultants, indicated that there has been a 70% decline of wealth amongst the US population, and Trump’s promise of “making America great” has to come

about; especially for those who voted for him, hoping for change and an improvement in their lives. If not, it will be a huge problem for Trump to tackle and the psychological element in the US will have far-reaching consequences.

What state will Europe be in?

Huw Pill from Goldman Sachs asserts that Europe is in a difficult situation; the fiscal economy is not sustainable, especially with the ECB continuing to buy debt, which has effectively destroyed southern Europe; these policies have, in turn, encouraged political tensions. **Professor Vicky Pryce** also added that the European economy is not doing well with a 1.5% growth and unemployment rates at worrying levels in Greece, Portugal, Italy, Ireland and Spain.

Both economists agreed that Brexit and the rise of populist Eurosceptic parties indicate deeper social factors and that the economy has to find a way of managing these forces. **Professor Pryce** went further in pointing out that Brexit was a catalyst for the rise of nationalism in France in view of their forthcoming election, as well as those coming up in the Netherlands and Germany, in addition to the precarious state of Italian politics. This instability is undeniably a huge drain on resources and consequently prices will inevitably rise.

One positive, from **Stavroula Betsakou** of Howe Robinson, was the prospect of establishing fuel production in the UK once again.

Can we bank on banks?

Cyrus Ardalan, Chairman of OakNorth Bank and the UK’s Financial Industry Advisory Services Board, introduced the topic by stating it was a difficult year for banking, with drastic changes in the industry; namely re-organisations, reductions in size and diversification, as well as dealing with further regulation, arbitrage and increased vertical integration.

Before the financial crash of 2008, the “too big to fail” attitude prevailed, with investment/commercial banks holding an excess of \$1 trillion of the UK’s GDP. After the crash exposed the risk, the industry underwent wholesale regulation, reduction in activity and profitability.



Owing to the regulatory environment, the recreation of the industry is unavoidable. In this respect, barriers to entry have fallen and banking has been reconfigured, with aggregation of supply demanding a flexible response; specialised products are being introduced tuned to clients' needs and niche banking to specific sectors.

Technology has changed banking radically – with online, phone and cloud banking, flexitech and inexpensive big data. The new integrated and greater processing models, such as peer-to-peer lending and financial platforms like PayPal, are ushering a new era in the industry.

Efthymios Christodoulou, former Governor of the Bank of Greece and **Nicholas Hadjiyiannis**, CEO of the Central Cooperative Bank of Cyprus, both maintained that over-regulation in banking had gone too far and it was draining the industry.

Mr Hadjiyiannis also contended that Eurozone banking is a very congested sector, with 130 large banks managing €30 billion servicing a €15.3 trillion economy, with financial technology not responding in Europe to disrupt and recreate existing systems.

Tomer Zaharovich, co-founder of Sunstone Compliance Strategy Group, made the case for compliance in the banking industry, saying that ironi-

cally it could even be advantageous in reforming an industry stuck in the old traditional ways.

He sees compliance as “smart solutions gaining opportunities” and a by-product of reforms, not only in the obvious tackling of fraud, but also in controlling terrorism. Unusual banking transaction patterns indicating suspicious behaviour have been reported to enforcement authorities and as a result terrorist attacks have been thwarted.

Ray Soudah, Chairman and founding partner of independent corporate finance group Millennium Associates, was scathing in his attacks on the current banking system; he declared that “banking is a mess, cellophaned and in a worse state than even post-Lehman’s.”

**‘Banking is a mess,
cellophaned and in a worse state
than even post-Lehman’s’
Ray Soudah**

He felt that European banks are not fit-for-purpose and exist only because they are supported and underwritten by their governments. They are not fulfilling their functions, as they just keep drawing surcharges and engage in speculative activities, since they appear not to be lending and not contributing to the economy.

Except for fringe banks, money platforms and small niche groups, traditional European banks produce no new revenue sources or innovative products. There must be pressure on banks to function and to become intermediaries for the economy; if they do not, they should either be merged, broken-up or failed.

Arjun Batra of Drewry Shipping Consultants pointed out that in the shipping bank sector Germany has predominated for many years; but their heavy exposure to shipping loans could mean that London has the opportunity to take the “crown” from German banks and become leaders in shipping finance – despite Brexit. This chimes in with the opinion expressed by **John Hayes**, Minister of State at the Department of Transport, responsible for Shipping & Ports, that the quality of maritime services is strong in UK, in both range and depth. Although Brexit will change things radically, it is this type of creative thinking required to provide the stimulus in a period of change.

The outlook amongst the panellists debating their views on the world economy, finance and banking at the 8th City of London Biennial Meeting brought to mind the well-known Chinese saying that we are certainly living in “interesting times”.

Professor Christos Zerefos: The art of climate change

Professor Zerefos explains his fascinating method of measuring past and present atmospheric pollution and dust through the red to green ratio in modern and past centuries' paintings. He is a passionate supporter of clean energy technology and counts a lot on the future car, using sustainable energy sources

Interview by Eugenia Anastassiou

How did your fascinating work estimating pollution levels in the earth's past atmosphere through old paintings come about and what inspired this particular reasoning?

Erupting volcanoes are considerably dramatic naturally occurring phenomena on our planet, but they have also had powerful effects in history and they have certainly affected civilisations, the way people live, and by extension culture too.

For instance, the Santorini supervolcano, which erupted 3,500 years ago, changed the entire political landscape of the ancient Mediterranean. It destroyed the Minoan civilisation, the dominant culture of the region, and the environmental effects were felt across the globe, as far away as China. It also impacted on Egypt. When a supervolcano erupts, it blocks the sunlight and this changes the atmosphere and it probably explains the biblical events described in Exodus (the famine, disease and plagues), since the lack of sun caused all the crops and animals to die out.

Another volcano, Laki in Iceland, which erupted over an eight-month period in 1783 and 1784, caused a huge



The European Intercomparison Campaign with instruments measuring the harmful solar ultraviolet radiation reaching the earth. Left to Right: Professor Zerefos with his international team Anne Webb, Heinz Ott and Brian Gardiner

drop in global temperatures as sulphur dioxide discharged into the Northern Hemisphere. This resulted in massive crop failures in Europe and may have caused droughts in India.

In North America, Benjamin Franklin recorded in his observations that it was "odd weather" and the winter of 1784

was the longest and coldest on record; the bad weather even delayed Congressmen in coming to vote for the Treaty of Paris, which would end the American Revolution – another instance of weather affecting the course of history.

The Tambora eruption in Indonesia in 1815, considered to be the larg-

est eruption to have occurred in 750 years, also changed the world. More than 60,000 people were killed and it turned summer into winter across much of the Northern Hemisphere. The eruption created a year without a summer, leading to food shortages –people were eating cats and rats– and there was great hardship throughout Europe and eastern North America. In addition, there was the cataclysmic explosion of Mount Krakatoa, also in Indonesia, nearly 70 years later, in 1883.

This accumulation of extreme volcanic activity inspired the research, as contemporary accounts describe brilliant sunsets and red skies after Krakatoa's eruption; it is also reflected in the increasing "reddening" of colours in the art of the time. The paintings of English landscape artist J.M.W. Turner of blurred sunlight and red sunsets are great examples of this common post-volcanic phenomenon.

Volcanic dust and darkness did not just inspire artists, but the bad weather influenced literary figures of the time as well. Lord Byron wrote the apocalyptic *Darkness* after the eruption of Mount Tambora, demonstrating that souls of many great creative talents are indeed influenced by weather conditions.

I had a dream, which was not all a dream.

The bright sun was extinguished, and the stars

Did wander darkling in the eternal space,

Rayless, and pathless, and the icy earth

Swung blind and blackening in the moonless air

Please explain to us how you measure changes in the environment and what the criteria are.

Climate is a slow process; it is approximately a 30-year cycle of averaging weather patterns and we study the measurements of these changing values.

The word "climate" comes from the Greek word "klima" meaning inclination and it refers to the effect of the angles of the sun on the earth. Moreover, the ancient Greeks invented meteorology, the study of atmospheric disturbances, with Aristotle describing seven types of climate change in his *Meteorologica*, written in the 3rd century BC.

Professor Zerefos

Cairo-born Professor Christos Zerefos is head of the Research Centre for Atmospheric Physics and Climatology at the Academy of Athens and for the past 35 years he has been at the forefront of pioneering research in global environmental change, especially the variability of the ozone layer and the effects of aerosols on the stratosphere.

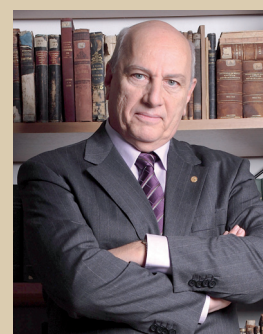
Over his long career as an atmospheric scientist, both researching and teaching, Prof. Zerefos has been a coordinator, partner or consultant in numerous international scientific projects. It was his initiative to create the World Meteorological Organisation (WMO) Northern Hemisphere Ozone Mapping Centre, as well as organising the four large International Ozone Conferences; during the one held in 1984, the "hole" in the ozone layer was first discovered and from this conference the phenomenon was subsequently explained to the wider world. Additionally, the professor has been a Member, Secretary and President of the International Ozone Commission at the International Association of Meteorology and Atmospheric Sciences (IAMAS) over a period of 24 years.

Prof. Zerefos also served as Greek State Secretary for the Environment in 1989, as well as working towards stricter European policy on chlorofluorocarbon gases (CFCs). He adapted Greek environmental legislation to comply in addition to creating an early warning system to tackle air pollution in Athens.

He has also been responsible for creating a range of educational and scientific research institutions in Greece, such as The Navarino Environmental Observatory in Messenia, The Geo-Astrophysics Museum at the National Observatory in Athens and the Laboratory of Atmospheric Physics at the University of Thessaloniki. He also founded the UNESCO Chair on Natural Hazards and the Graduate Programme on Environmental Physics.

Christos Zerefos has received many international awards and worldwide recognition for his scientific work and his campaigns to improve environmental legislation and further measures to protect the environment and the ecosystem, namely as a member of the European Academy of Sciences, a Member of the Norwegian Academy of Sciences and Letters and decorated as a Commandeur Académique by the French government.

He also received the United Nations Environment Programme's Global Ozone Award, "for his long-term ozone research, his advice to the EU on ozone and UV radiation, for his guidance to young scientists and as the Head of the WMO Northern Hemisphere Ozone Mapping Centre."



This knowledge, which focused on wind movement, as well as the significance of the positions of the sun and moon in the sky, enabled the ancient Greeks to forecast phenomena such as tides and other weather conditions essential to the workings of their daily lives.

Climate oscillations –a type of recurring global or regional climate pattern– was determined in the 20th century and we can now study how these oscillations turned into good or bad weather, in the context of history. Furthermore, it was also since the last century that man could interfere with the environment and could actually effect changes in climate.

The atmospheric chemist and Nobel laureate Paul Crutzen called this modern phenomenon "anthropocene" in 1995 and in fact consulted with Professor Zerefos regarding the Greek terminology –"anthropos" and "cene". In other words, it means the "era of recent man" and it denotes how the effects of human activity have become clearly noticeable on the environment globally.

Undoubtedly, gases have existed in nature throughout the earth's existence, but it is modern man's contribution to the increase of greenhouse gases –the main ones being water vapour, carbon dioxide, methane, nitrous oxide and ozone– by 30%, which is having a concerning impact on the environment.



Research activities from the ground with balloons and aircraft organised by Professor Zerefos from his base in Greece

Humanity may end up doubling the concentration of gases which control the equilibrium of the hydrosphere, biosphere and geosphere. These disturbances are measurable, such as obvious changes in the ice caps in both North and South Poles, as well as changes in water levels and temperatures. In fact, water is a great indicator of atmospheric changes in wind and temperature because it holds “memories” of climate for up to a decade.

The danger of the increase in greenhouse gases as the earth warms up is that there is a redistribution of rainy regions; water is constant, but with climatic instability different areas will get rain and others will become arid.

Greece's volcanic activity

Greece has had some very destructive volcanic activity in the past and there are still some live ones – namely Sousaki, Milos, Nisyros, Yiali, Santorini. How likely are they to erupt?

Greece has both land-based volcanoes and submerged volcanoes under the sea, between the African and Eurasian tectonic plates, squeezing and creating seismological conditions at the deepest point of the Mediterranean, 4km in depth, south of Nestor in Pylos, in the southwest Peloponnese.

One of the most active seismic zones in western Eurasia follows the Hellenic arc, which ranges from the Ionian Islands to Kastellorizo, near Rhodes, coupled with the volcanic complex which comprises the most dynamic part of the South Aegean Volcanic Arc. Reserves of oil and gas in the Eastern Mediterranean make the geology of the region very similar to that of California and the San Andreas Fault, which is also an area

which exists on the “knife-edge” of expected large earthquakes.

Predicting the precise occurrence of earthquakes and volcanoes is extremely difficult, as they are so unpredictable. Even in a country with well-studied volcanoes, such as Japan, at least 40% of the big eruptions are missing from their records. Despite ongoing studies and measurements, volcanologists can only really gauge the signs of an eruption just a few days before.

As an expert on ozone, UV, aerosols and climate change, are there spheres where we are improving?

Aerosol levels are improving globally, except in Southeast Asia, China and parts of India, the chief reason being that industry in those areas of the world is trying to develop and catch up to 20th century industrial levels, so environmentally they are “behind” in terms of controlling pollution in the 21st century. In China, the combination of smoke and smog is similar to the notorious London “peasouper” fogs of the 1950's or to the extreme pollution in Los Angeles – but in China this occurs every day.

The plus point in better aerosol and pollution control is more sunlight, which in turn warms up the environment and accelerates the greenhouse effect – so whilst doing good in one capacity, it is detrimental in another.

Are there areas where things are getting worst?

There is deterioration in climate change where ozone is depleting, especially over the Arctic and Antarctica.

Yet some reduction is expected as layers of the atmosphere are changing and higher levels are cooling the polar stratosphere, especially in the summer, when the sun returns to the South Polar cap from August and reaches its peak in October.

It is now predicted that the hole above the South Pole will close permanently by 2050 and this improvement is down to the success of the 1987 Montreal Protocol – which banned the use of CFCs in aerosols and fridges. However, it looks more likely that this will occur in the 2070s.

Portraying climate change through art

Prof. Zerefos and his team at the Academy of Athens took a most original and unusual approach to their research into climate change by looking into 554 paintings by 181 famous artists, spanning from the 16th through the 19th century, in order to understand past changes in climate and how that would improve our current knowledge as well as helping to develop better computer models and more accurate predictions for future climate change.

The investigation centred around studying Old Masters painted around the times of intense volcanic activity, during a period which included over 50 large eruptions around the globe.

Zerefos says, “We found that red-to-green ratios measured in the sunsets of paintings by great masters correlate well with the amount of volcanic aerosols in the atmosphere, regardless of the painters and of the school of painting.”

The scientists categorised 54 of the paintings studied as “volcanic sunset paintings” because they were painted within three years of major volcanic eruptions; these included works by various artists across Europe, such as Turner, Rubens, Rembrandt, Gainsborough, Degas and Klimt. Professor Zerefos affirms that, “Nature speaks to the hearts and souls of great artists. They all may have different ways of painting, but the colours they used were representing the real environment.”

By measuring the amount of red and green in the paintings, the scientists were able to gauge the level of dust in the atmosphere. Zerefos adds that “the greater the pollution, the redder the sunset.”

Zerefos and his team supported their research by asking an artist to paint sunsets during and after the passing of a Saharan dust cloud; to control the experiment the artist was not informed of these conditions. The researchers compared measurements of red-to-green in the recent “sunset” paintings and the Old Masters to results from their previous scientific data and they found it all correlated.

Are governments and policies, especially international agreements on the environment, able to curb further damage?

The Paris Agreement has built its success on the example of the 1987 Montreal Protocol and for the first time it brings all nations into a common cause to undertake greater efforts to combat climate change and enhance support in assisting developing countries in their attempts to tackle the problem as well. One of its aims is to hold the increase in average global temperature to well below 2°C above pre-industrial levels.

We now have a US President who is not “convinced” by climate change and is keen on fossil fuels. How would you convince him otherwise?

President Trump should focus his attention on high-tech renewable energy and get a command of geological technological advances in fracking and cracking. Fracking is the process of injecting liquid at high pressure into subterranean rocks forcing open existing fractures to extract oil or gas and it has created a shale gas boom in the USA. Cracking is used by the oil and gas industry to break down larger products into smaller by-products. For example, crude oil can be processed (cracked) to produce lighter products, such as petrol and liquefied petroleum gas (LPG).

Alternative energy sources

He should concentrate and invest in alternative energy sources such as sun, sea, geothermal energy and hydroelectric power. In fact, harnessing hydroelectric power is quite an “old fashioned” approach, suggested by the early 20th century inventor and electric engineer Nikola Tesla.

Recently, Bill Gates together with other global business leaders announced plans to make a significant investment in clean energy technology to tackle climate change over the next 20 years and there are moves to toughen up companies’ disclosures on their environmental impact – is this a case of the business community doing too little, too late?

Bill Gates is a great “influencer” and has the capacity to accomplish a project

Electric Cars: Driving into the future

Brothers Christian and Nicolaus Oldendorff, owners of German shipping company Reederei Nord, also gave a presentation at the recent 8th City of London Biennial Meeting at the IMO, focusing on their diversification into the electric motors market, regarding them as the way forward in an industry which has no real competition yet.

Like most new innovations, consumers are currently hesitant about taking up EVs, namely because of their high-cost both to drive and their reliance on expensive batteries. However, this is set to change as innovators like Tesla Motors’ CEO Elon Musk aims to mass-produce electric car batteries in order to lower costs, as well as installing his own nationwide network of “Superchargers” that only Tesla drivers will be able to use free of charge. This will also secure Tesla’s place as the current dominant EV producer and with this move Musk hopes that electric cars will be cheaper to run than petrol-fuelled cars by 2022.

Another inducement to encourage consumers to “go electric” is government incentives to lower car costs and introduce more public charging points. With 1.4 million plug-in points to be incorporated into Japanese and Chinese infrastructure and the EU’s regulations demanding that all new and renovated homes come with an installed electric vehicle charger by 2019, the market for electric cars is set to boom.

Added to that, more large cities are planning to ban diesel cars in city centres, including Paris, Madrid, Mexico City and Athens. Some are even considering totally forbidding car use in the centre, with Oslo leading the way in 2019 and the Norwegian government preparing the way to ban all cars using petrol in the country by 2025.

Professor Chris Zerefos asserts that plug-in electric vehicles (EVs) will be an essential component in tackling climate change and they will be vital in cutting carbon emissions and dealing with increasing air pollution in cities. Analysts forecast that in the 2020s they will be the transport choice of the future and by 2040 it is predicted that 35% of new cars (approximately 41 million) sold globally will be EVs.

It certainly looks like the future is indeed electric.



Nicolaus Oldendorff giving his presentation on electric cars at the IMO Conference in London

of this magnitude, as well as being able to bring in other business leader into this mission. He is also someone who can understand the problem and has a vision of how to move things forward, especially industry practices which are still stuck in the 19th century.

So, I am optimistic when someone of Bill Gates’ standing takes this on, together with others like Elon Musk, the founder of electric car manufacturer Tesla Motors, who is also part of this movement. The reinvention of the car to use sustainable energy sources will revolutionise the motor industry and will certainly hit the environmental targets set by the Paris Agreement and the Marrakech Climate Change Conference of November 2016.

Are you optimistic or pessimistic with regards to the effects of climate change?

I prefer to be optimistic. Firstly, increased knowledge about the environment and the impact of climate change has progressed significantly over the years. In addition, improved education also increases awareness of the issues, together with more research into more advanced sustainable and/or alternative energy sources. This has to be done to ensure a better future for our grandchildren and great-grandchildren.

One of my greatest hopes is that there will be less desire for conflict and the energy and resources spent on war and the arms industry are directed to more positive and life-enhancing ventures.

“Villa Thalia”: A love letter to suffering Greece

For the first time, a contemporary play by Alexi Kaye Campbell about modern Greece has been produced at the National Theatre in London

Interview by Eugenia Anastassiou

What was the impetus and inspiration of writing *Sunset at the Villa Thalia*? Even though it was set in the past, how does it corollate to the present economic crisis in Greece?

The continuing Greek economic crisis was very much in the forefront of my mind when the National Theatre commissioned me to write a play. The National said I could choose any topic I wanted, but the incentive to write about Greece was already there. When I started on the play, the crisis was in its fourth or fifth year, so it certainly motivated exploring the theme of the Greek experience through the crisis.

Ostensibly, the way I write is to try and conjoin personal and political spheres. I endeavour to write about a specific situation and environment, which on the surface is both familiar and intimate, while simultaneously hoping to make it relevant to a wider, more global context.

Sunset at the Villa Thalia was not exclusively about Greece – I wanted it to go beyond that and touch on more universal themes. The “sunset” of the title is a metaphor for the demise of

a certain type of system, something I feel we are now witnessing in various manifestations, including of course the Brexit vote and the election of Donald Trump – an angry rejection of the political and economic status quo. With the play, I wanted to examine what happens when a certain class of people feel forgotten or left out. Inevitably, a structure and system which allows that to happen will eventually break down, as we have seen with these recent political events.

‘If Greece is able to use the suffering and crisis of the past decade to change some of its ways, then that will be what I consider ‘a happy ending’

The play also deals with different forms of colonisation, economic differences enabling wealthier and stronger countries to wield power over weaker countries, as well as cultural appropriation.

Of course, I wanted to approach all these subjects in a way which was also entertaining, so as with all my plays I try and use a certain degree of humour.

Will you be exploring further Greek themes, either in theatre or film?

Nearly all my plays have some reference to Greece and *Villa Thalia* was a love letter to Greece; it was my way of honouring Greece – at least those in Greece whom I feel have been forgotten or betrayed.

I also realised that it was the first time a contemporary play about modern Greece had been produced at the National Theatre in London, with people actually speaking Greek on that stage and it was gratifying for me as a Greek to know that I was able to achieve this.

There have been offers to produce *Villa Thalia* in Greece, but I do not really think the play would work on a Greek stage. Drama needs good subtext and one of the ironies is that *Villa Thalia*, which is the most Greek of my plays, gets “lost in translation”. This is because it requires the American and English characters to speak English and

for them not to understand the Greeks in the play and vice-versa – that lack of communication between the English-speaking characters and the Greeks is pivotal to the breakdown in relating to one another.

As a Greek living in London and on a personal level, how do you view what is going on in Greece now?

Like many people, what often angers and dismays me about the situation in Greece is the fact that the people feeling the full pain of the crisis are not the ones who have necessarily caused it.

Through my comings-and-goings to Greece to see my family there [Alexi has a brother living in Athens] I can also see how frustrating living, working and setting up a business can be. I also see other negatives as well, such as the self-sabotage Greeks inflict on themselves and the way certain bad habits thwart progress and blind them to aspects of economic reality.

'The 'sunset' of the title is a metaphor for the demise of a certain type of system, something I feel we are now witnessing in various manifestations, including of course the Brexit vote and the election of Donald Trump – an angry rejection of the political and economic status quo'

As an Anglo-Greek, born and bred in Athens, but also as an English boy, how were your experiences growing up in Greece?

My childhood was certainly interesting being bicultural and bilingual, since both Greek and English were spoken at home. I spent seven years at school, as well as my teenage years in Athens, initially at a Greek "dimotiko" and then in British international schools for the rest of my education.

There will always be that dichotomy within myself and it comes from my parents: having the more reserved, less impetuous English heritage from my mother and the fuller-on, temperamental characteristics of my Greek father.

Alexi Kaye Campbell: Penning the personal and the political

Award-winning Anglo-Greek playwright and screenwriter Alexi Kaye Campbell was born Alexi Komondouros in Athens, to a Greek father and a British mother of Scottish descent. His childhood and teenage years were spent in Athens, initially attending a Greek primary school, followed by the British international schools Campion and St Lawrence College. He completed his studies at Boston University and went on to train as an actor at the Webber Douglas Academy of Dramatic Art in London.

His twenty-year acting career saw him perform with the Royal Shakespeare Company and at The Royal Court Theatre, as well as small roles in UK TV series; but it was Kaye Campbell's debut play, *The Pride*, produced in 2008, which really began to get him noticed as a considerably talented and highly original writer.

Described both as "a searching, moving and thoroughly grown-up play" (*The Daily Telegraph*) and "a brave and rewarding drama that speaks to us all" (*The Guardian*), *The Pride* received great acclaim including a Laurence Olivier Award for Outstanding Achievement and The Critics' Circle Prize for Most Promising Playwright for Alexi. *The Pride* also proved to be a success worldwide, with productions staged in the USA, Australia, New Zealand, Japan, South Korea, Italy, Sweden, Belgium, Germany and in Greece.

Alexi Kaye Campbell went on to write three further successful plays between 2009 and 2011 and he turned to screen writing, bringing to life the compelling story of Maria Altmann in the film *The Woman in Gold*.

The film, starring Oscar-winning actress Helen Mirren as the Jewish Austrian Maria Altmann, follows her decade-long struggle and determination to reclaim her aunt Adele Bloch-Bauer's portrait by Gustav Klimt from the Austrian government. The famous gold-flecked painting, known as the "Viennese Mona Lisa", had been confiscated by the Nazis from her family during World War II.

The *New York Observer* praised it "as a touching film that entertains with warmth and humour while teaching us something about history, law and justice with enormous heart, subtlety and compassion, brilliantly acted and skilfully written." *The Woman in Gold* went on to become the highest grossing independent film of 2015, bringing in over \$33 million in the USA alone.



Award-winning, Anglo-Greek play and screen writer Alexi Kaye Campbell

Of course, I have a sense of belonging and not belonging to either culture, and not fully belonging is disconcerting in a person, especially when you are young. Now that I am older, I find it can also be empowering – and it is certainly an advantage to a writer to have that "outside" eye and be able to have a broader picture.

I find that being half-English makes me particularly aware of a certain code of behaviour connected to the English preoccupation with manners, but it can also make me a little too judgemental

at times. Being half-Greek means that I am not an insider and I can observe things from a slight distance. Nonetheless, what I try and do is pick the best parts of both cultures.

Would you go back and live in Greece again?

I enjoy being able to go backwards and forwards between the UK and Greece and my family have a house in Syros, where *Villa Thalia* was written. So once again, I am lucky to be able to have the best of both worlds.

If you could write a “happy ending” to the Greek saga, what do you think its message would be?

For me a “happy ending” is a hopeful one in which the protagonists –in this case Greece and the Greeks– begin to understand something of the forces that drive them and reach a point where they can begin to attain some self-knowledge. This realisation will inspire the decision to stop behaving in ways which have caused damage in the past. If Greece is able to use the suffering and crisis of the past decade to change some of its ways, then that will be what I consider “a happy ending”.

‘Like many people, what often angers and dismays me about the situation in Greece is the fact that the people feeling the full pain of the crisis are not the ones who have necessarily caused it’

Turning to the success story of *The Woman in Gold*, how did you get to write the screen play?

The producers were scouting for playwrights and fortunately for me they had seen *The Pride*. I was very keen to do it, since the story of Maria Altmann’s struggle, plus her strength of character, was extraordinary.

The motivation behind my pitch was slightly different from other writers; I focused on Maria Altmann’s drive to reclaim the painting coinciding with a need to deal with her survivor’s guilt.

It also helped that a leading actress of Helen Mirren’s calibre liked the script and her brilliant performance propelled the film to become such a success internationally.

Will you be writing more films? How different are screenplays from theatre work?

I am already working on a couple of films and enjoy the medium a great deal. It is also gratifying to know that your work reaches a much wider audience. Theatre is my first love and I am sure that I will keep returning to it, but for the time being I am more than happy writing for cinema. It is a much more col-



Scene from the performance at National Theater of London

Sunset at the Villa Thalia

His most recent play, *Sunset at the Villa Thalia* (written in Syros island), premiered in May at the National Theatre in London and was set on the Greek island of Skia-thos, where Alexi spent many happy childhood summers.

The play is set in the mid-60s and centres around two couples, one American and one English, holidaying on the island during the tumultuous years of the junta in Greece. Despite the “sun, sea and retsina” atmosphere, the political undercurrents run deep; it gradually exposes the way the two foreign couples influence each other and the impact their actions have on the Greek locals – a metaphor of what was happening in the context of the wider political world at the time, especially the relationship between Greece, the UK and the USA; as well as revealing Greece’s cultural and economic take over by other countries, which is still relevant and on going today.

laborative medium and sometimes can be quite creatively compromising, but there are many perks as well, not least the fact that you get paid properly!

What advice would you give someone breaking into such a notoriously difficult industry?

As writer resilience is necessary in a very competitive industry, you must face a lot of frustration and rejection; you have to be able to carry on, both as an actor and a writer. There were years of mundane, temporary jobs, since I had to make ends meet.

I read a great deal, anything and everything (novels, plays and a great deal of history) as it is important to be stimu-

lated by other people’s ideas and lives and not lock yourself up in a room – that will come later, when you need to write. It is vital to be out there and draw inspiration from other people and the world around you.

Finally, I think it is always useful to know the type of audience you are aiming for in your story. A certain amount of generosity towards the people you are addressing is essential. This does not mean you water down the authenticity of the message you are trying to convey – it just means that the way in which you communicate something is also part of the art of storytelling. Ultimately, you are not writing something solely for yourself and to impress your peers.