

INCLUDING: PROF GRAHAM MADDOX | DR GEOFF JAMES | A/PROF KRISTINE BARLOW-STEWART & MORE



PERSONALISED
MEDICINE:
More Than Just Personal

A STEAMPUNK VISION:

Prosumers

OPEN SCIENCE DRUG DISCOVERY:

Global Solutions



# Politics Science

Available Now At: PocketMags.com

For only \$14.99 receive a year's subscription to AQ: Australian Quarterly on all your favourite mobile devices, Mac and PC.

Interrogating Politics, Science and the spheres in which they overlap, AQ is the only magazine devoted to Australia's scientific future.



To take advantage of our print subscriptions (1 year for \$26) visit https://AQ.magazine.com.au

# How to subscribe



Rates include GST. \*GST does not apply on overseas subscriptions.

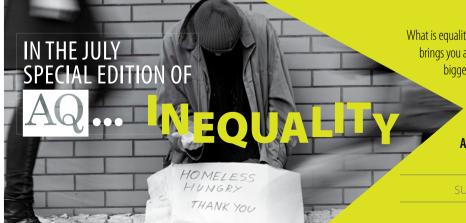
Postage included in rate. Airmail used for overseas distribution.

# Subscribe and pay online at www.aips.net.au/aq-magazine/subscribe

The subscription period is based on the calendar year: January to December – 4 issues per annum. Back copies will be forwarded.

# Subscription Rates

AQ Individual and schools subscription \$26 AO Individuals (Overseas) \$35\* Organisations (Australia) \$132 **Individual Digital Subscription** \$14.99 Organisations (Overseas - Asia & Oceania) \$145\* (through www.pocketmags.com.au) Organisations (Overseas - Other than Asia) \$165\* AIPS Membership includes AQ subscription \$88 AIPS Membership Overseas includes AQ subscription \$110\*



What is equality and why is it such a hard thing to achieve? In July, *AQ* brings you a Special Edition on an issue that underpins some of the biggest challenges facing Australia and the world. Featuring:

#### Eva Cox AO

**Prof Peter Whiteford** — ANU

Michael Cooney — Chifley Research Centre

Anne Lennon & Jay Boolkin — Social Change Central

And much more.

SUBSCRIBE NOW AT: AO.MAGAZINE.COM.AU

# **CONTENTS**



VOL 88 ISSUE 2 APR-JUN 2017













# Open Source **Drug Discovery**

Global Solutions to Global Problems **DRALICE E WILLIAMSON** 

## State of the Nation: Victoria

Curiosity, Passion and Life-Long Learning ~ Catalysts of Victoria's Future DR AMANDA CAPLES

## Land of the Free (Market)

The Oxymoron of American Democracy PROF GRAHAM MADDOX

22

# A Steampunk Vision

Prosumers and Frequency Control DR GEOFF JAMES

28

## Between the Gaps

Science and SciComm DR ANDREW STAPLETON

### Personalised Medicine

More Than Just Personal A/PROF KRISTINE BARLOW-STEWART

38

## The Plutocene

Portents for the Post- Anthropocene Geological Era DR ANDREW GLIKSON

References – page 41

# **AWORD**

f it could be said that there was a fundamental energy that fuelled human society, it would be that fissive, uncontrollable, potentially-explosive power born of the tension between the past and the future.

We're drawn to the irresistibility of the future without being able to escape the gravity of the past – a convenient over-simplification is: the cold electricity of progress versus the warm embrace of nostalgia.

To my mind, the feeling of our social fabric being pulled both forward and back, stretching and thinning like a balloon, has never felt so pronounced as it has in the last 12 months.

The rapid run away of technologies that could alter the very nature of humanity, the fistthumping roll-back agendas of Trump and the resurgent Tony Abbott. The alienation of free media straight out of the Golden-Age-of-Dictators playbook, stock markets skyrocketing on a wave of apparent optimism, even as global cynicism reaches its peak. Entrenched corporate interests playing frantic whack-a-mole with disruptive technologies...the list goes on - sometimes it's hard to know what era we are actually living in.

Most of this edition's articles exist at this critical past/future junction and a common theme links each of these. The power structures that oppose these new movements have chosen to be so rigid that adaption is not an option; only destruction is likely to make way for change.

We discuss Open Source Drug Discovery with Dr Alice Williamson, and see how transparent science is revealing the transparent greed of Big Pharma.

Dr Geoff James plots the inevitable transition of Australia's electricity consumers into 'prosumers', at a time when the Australian Government is inexplicably advocating the construction of more coal-powered energy.

We also stand on the edge of an era of personalised medicine - where we can hold our own genetic secrets in our hand. But are we ready for such knowledge, and how can me make sure that the future is set up to benefit us?

And speaking of eras, Dr Andrew Glikson dives into the planet's geological future/history to theorise on how short-lived the Anthropocene will be, and what will be the next geological era that human activity has ushered in?

There's all this and more in this jam-packed edition!

#### **Grant Mills**

Editor-at-large

#### NOTES FOR CONTRIBUTORS

AQ welcomes submissions of articles and manuscripts on contemporary economic, political, social and philosophical issues, especially where scientific insights have a bearing and where the issues impact on Australian and global public life. All contributions are unpaid. Manuscripts should be original and have not been submitted or published elsewhere, although in negotiation with the Editor, revised prior publications or presentations may be included. Submissions may be subject to peer review. Word length is between 1000 and 3000 words. Longer and shorter lengths may be considered. Articles should be written and argued clearly so they can be easily read by an informed, but non-specialist, readership. A short biographical note of up to 50 words should accompany the work. The Editor welcomes accompanying images. Authors of published articles are required to assign copyright to the Australian Institute of Policy and Science, including signing of a License to Publish which includes acceptance of online archiving and access through JSTOR (from 2010) or other online publication as negotiated by the Australian Institute of Policy and Science. In return, authors have a non exclusive license to publish the paper elsewhere at a future date. The inclusion of references and endnotes is the option of the author. Our preference is for these to be available from the author on request. Otherwise, references, endnotes and abbreviations should be used sparingly and kept to a minimum. Articles appearing in AQ are indexed ABC POL SCI: A Bibliography of Contents: Political Science and Government. The International Political Science Abstracts publishes abstracts of political science articles appearing in AQ. Copyright is owned by the Australian Institute of Policy and Science. Persons wishing to reproduce an article, or part thereof, must obtain the Institute's permission. Contributions should be emailed to: The Editor at info@aips.net.au



#### **Australian Quarterly**

#### EDITOR:

Grant Mills

#### **ASSISTANT EDITOR:**

Camille Thomson

#### **DESIGN AND PRODUCTION:**

Art Graphic Design, Canberra

#### PRINTING:

Newstyle Printing, Adelaide

#### SUBSCRIPTIONS:

www.aips.net.au/ag-magazine/ subscribe

#### **ENQUIRIES TO:**

Camille Thomson, General Manager,

AIPS,

PO Box M145,

Missenden Road NSW 2050 Australia Phone: +61 (02) 9036 9995 +61 (02) 9036 9960 Fax. Email: info@aips.net.au Website: www.aips.net.au/

ag-magazine/ Facebook: www.facebook.com/

AQAustralianQuarterly

ISSN 1443-3605

AQ (Australian Quarterly) is published by the Australian Institute of Policy and Science.

This project is supported by the Commonwealth Government through a grant-in-aid administered by the Department of Finance and Deregulation.

ACN 000 025 507

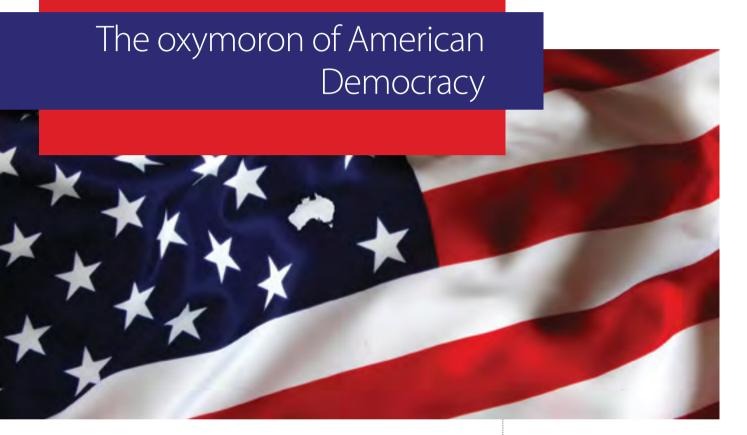
The AIPS is an independent body which promotes discussion and understanding of political, social and scientific issues in Australia. It is not connected with any political party or sectional group. Opinions expressed in AQ are those of the authors.

#### **DIRECTORS OF THE AUSTRALIAN INSTITUTE OF POLICY AND SCIENCE:**

Leon R Beswick (co-Chair) Andrew Goodsall Maria Kavallaris (co-Chair) Jennelle Kyd Suresh Mahalingam Ross McKinnon Peter M McMahon Peter D Rathjen

# Land of the Free (Market):

Graham Maddox is the author of the new book Stepping Up to the Plate. America, and Australian Democracy. For more information see page 20



The paradox of democracy is that it is designed to defend the freedoms of all and to subject the government to the legitimate concerns of the people. Yet those very freedoms give licence to those who fundamentally spurn them and threaten the ideals of democracy themselves. The Inauguration of Donald Trump illustrates the paradox. The demonstrations against his accession were greater that the public show of support at his swearing in.

ARTICLE BY: PROF GRAHAM MADDOX

IMAGE: © garycycles8-Flickr

rump was elected on a tide of emotional fervour from middle America, while the traditional powerhouses of New York and California raised stormy billows against everything he stood for. Many of his hostile pronouncements and Twittered epigrams were against the very spirit of democracy, particularly those directed at minorities within the population.

Some trust that the Congress, although dominated by the Republican Party that nominated him, will act as a brake on his more outlandish intentions. Yet the peculiar nature of the Constitution of the United States is that its system of separated

The American Founders had a dim view of ordinary persons, and associated their allegedly plundering activities with democracy, which ever was folly and disease. They therefore determined that the people should be kept at arm's length from the levers of power. The constitution they fashioned for the Union was not democratic.

branches allows the executive to claim. wide powers, and the President is not subject to termination by Congress except under the extreme circumstances of an impeachment.

Many commentators discern a resonance between the British vote to leave the European Union, the resurgence of the One Nation Party in Australia and Trump's election. The reasons for mass votes are complex and multi-faceted, but it is reasonable to see a common thread of disaffection from the established mode of politics.

In the case of the United States this is scarcely surprising, since the nation that claimed as its mission to make the world safe for democracy has recently experienced a series of crippling deadlocks between Congress and Presidency. Moreover, the extent of inequality, and the spread of actual pauperism, is bound to create disillusion and hostility.

## The foundations of American constitutionalism

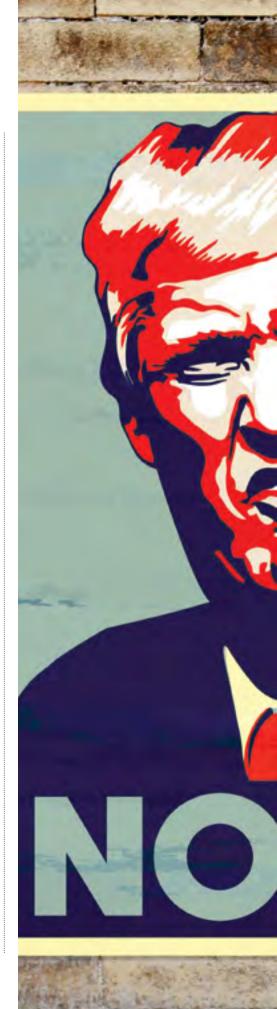
It is not always recognised that the seeds of disillusion were sown at the foundation of the Republic. Some of the American colonies had been built on strongly democratic principles. That is to say, they gave the ordinary citizens a big say in how they were governed, frequently by direct participation in the rule of the community.

For all its particular drawbacks, the colony of Massachusetts was compared favourably with ancient Athens, which, for all its faults, gave supreme and equal respect to every citizen – and a voice in

government. At the foundation of the colony, Governor Winthrop told his followers migrating from Europe to value each other as one big family, to delight in each other, and to 'abridge [themselves of their] superfluities' in order to use their goods to care for the poor among them. He envisaged a Christian welfare state.1

When the colonists rose up against British rule and the 'tyranny' of King George III, there burst out a contagion of liberty which some of the more 'respectable' citizens thought a disease. Ordinary folk, farmers. labourers, shopkeepers were mobilised, and many were elected to the colonial legislatures. One Boston newspaper thundered that 'sedition itself' makes laws.2

To most 'gentlemen' the rise of the common person was appalling. To be wise and virtuous was to own land. Virtue sat firmly with the rich, while the poor were by definition corrupt, because their whole political intent was to wrest power and wealth away from the rich. The second President of the United States, John Adams, whined that 'The idle, the vicious, the intemperate would rush into the utmost extravagance and debauchery, sell and spend their share, and then demand a new division of those who purchased from them.'3 The American Founders had a dim view of ordinary persons, and associated their allegedly plundering activities with democracy, which ever was folly and disease. They therefore determined that the people should be kept at arm's length from the levers of power. The constitution they fashioned for the Union was not democratic.







The Founders met at Philadelphia in 1787 to draw up a more perfect union for the colonies, now to become states - The United States. The principal drafter of the document, James Madison, drew up a plan to stop any tyrant from gaining power over the federal government. He obsessively feared 'faction', the collection of interests inimical to the whole. As one might gather from the foregoing notes on the attitudes of gentlemen to people of the ordinary sort, prone no less to debauchery, the faction he feared most was the faction of the multitude

His scheme was to separate the powers of government into three branches: the Presidency, the Congress, and the Supreme Court. These powers were to be set against each other, to 'balance' each other, each preventing either of the others from gaining too much power. In effect, he built deadlock into the Constitution,4 so we should not be too surprised that people have lamented the fierce deadlock between the Congress and President in the Obama years – it was meant to be. The Supreme Court has played its blocking part, too, savagely negating much of the program of Franklin Roosevelt during the Great Depression, for example. To repeat: the Constitution was meant to keep the ordinary people and their special representatives out of power.

It is now well known that for anyone to contest any significant office in the United States one must have wealth, and to run for President it is almost obligatory (Obama perhaps excepted) to be a multi-millionaire. In this, at least, the Founders would

be pleased. It is no longer self-evident. however, that riches confer either wisdom or virtue. A recent notable example of the continuing influence of the Constitution was the election of Donald Trump.

As we all know. Trump did not win a majority of the popular vote, falling about three million votes behind his rival. Yet he won a majority of electoral college votes. The Electoral College was set up in the Constitution specifically so that the choice of President would not fall into the hands of the multitude. Like the European Electors in early modern Europe, all of them potentates, the American electors were meant to be persons of wisdom and refinement (wealth).

Almost immediately, and much to the distress of the Founders, Madison and Alexander Hamilton, people began to vote for slates of Electors pledged to vote for particular presidential candidates, with the winner taking all the Electoral College votes. This was a minor democratic incursion into Madison's tight system, but the college remains a giant Gerrymander, as we saw with Trump. In the traditional centres of power, New York and California, Hillary Clinton piled up massive majorities which yielded no more electoral advantage than the set number of electors.

#### Redefining democracy

At the time of the Revolution the American colonies were rife with democratic fervour, and these impulses were not to be suppressed. Yet the Constitution was to acquire the sanctity of holy writ, and the

To run for President it is almost obligatory (Obama perhaps excepted) to be a multi-millionaire. In this, at least, the Founders would be pleased.

# Democracy had to be made real, not ideal,

and realism demanded that democracy be a description of the way things were done in America. It was a purely circular claim.



Founders would become the legendary fountain of all wisdom, so heavy was the perpetual propagation of their status.

In the movie, The Ides of March, George Clooney was to announce that his religion was a bit of paper called the Constitution of the United States. Despite the incubus of a highly conservative constitution, democratic endeavours were to challenge the status of the Establishment from time to time, only to be trumped by the bit of paper.<sup>5</sup> In time, democracy itself became a hallowed idea. Yet the way politics was conducted could hardly fulfil Abraham Lincoln's ideal of government of the people, by the people, for the people. The people have scarcely ever had a look-in.

If democracy was to make sense, it

would have to be made to fit into the American way of doing things, since the power elites were not going to let the conduct of politics change. Democracy had to be made real, not ideal, and realism demanded that democracy be a description of the way things were done in America. It was a purely circular claim – democracy is iust what we do.

Political scientists argued that politics was a matter of who gets what, when and how. Some of them conducted scientific

studies to prove that ordinary people were just not up to the job of engaging in politics. Many of those surveyed were ignorant and ill-educated, while some exhibited anti-social tendencies. With their voluntary voting laws, Americans do not mind if the 'ignorant' don't even vote. Keeping them at bay was a service to the system, while a recent visitor to Australia, the American satirist and political commentator, P. J. O'Rourke, speaking on the ABC's Q&A program, said that he would pay them to stay at home. A quaint reversal of the original democracy in Athens, where citizens were paid to attend the Assembly and the Jury Courts.

And so the 'real' description of American

politics has little to do with 'rule by the people' and, for most of them, nothing at all. The realist description was turned into a full-fledged theory of 'democracy' when the Austrian-American economist, Joseph A. Schumpeter, announced an unblushing declaration that

'democracy' meant rule by elites, who competed within their own circles for the people's votes.8 The historical content of democracy had been stripped to the bone.



IMAGE: © Jean Leon Gerome Ferris



IMAGE: © Joshua Twentythree-Flickr

## Redefining the people

If American democracy had to be different from all ideas of it that had gone before, this was perhaps a sign of America's 'exceptionalism'. Paradoxically, the idea of exceptional circumstances arose when some of the colonies really were democracies in the original sense.

The first Governor of Massachusetts, John Winthrop, alluding to scripture (Matthew 5:14), told his people that they were a light on the hill: the world was watching their experiment, and they had better behave in an exemplary fashion. There was no boasting about it. Yet Ronald Reagan, loudly extolling America's greatness, embellished the phrase and proclaimed that America was 'a shining light on the hill'.

The American people were different. Most of the colonists had come from a worn out and corrupt Europe to find a land of promise and progress. They left behind the rigid class barriers and the insolence of an entrenched nobility. To those not in the privileged classes, Europe and Britain gave no hope of rising above the struggle for existence. In the New World the prospects were unlimited, and persons determined to apply themselves to hard work and enterprising industry, and if needed 'to go someplace else', they could transform their lives with undreamt-of wealth.

Many did indeed become very rich very quickly. The person became *homo* economicus. It was nothing less than a transformation of human nature, according to liberal historian Joyce Appleby. Within an entirely new economic outlook the market schooled people into a newly autonomous order within themselves. Pursuing self-interest was made legitimate and greed received moral approval, as people became individuals rather than members of any community other than the market. Democratic ideals were invoked not to engage the people in self-government but to free them from the traditional authority that ruled the public order.9 Democracy was quite turned on its head, and became an economic value rather than a political opportunity.

A leading historian of the United States, Daniel Boorstin, located the newly redefined people in 'consumption communities' rather than political or social communities. Their unity was identified by their mass consumption of almost identical products. The 'retail revolution' and advertising created 'one of the most real and present

and unadulterated democracies in human history'. Its name was the 'cash democracy'. Being democratic meant acquiring wealth, or at least, reaching for it. Democracy had left the realm of government and entered the confines of the market.

The fiercely expressed liberty and equality of the American Revolution remained a powerful ideology, and American society would admit of no class divisions. Yet over time the market, allegedly based on competition, which of course implied winners and losers, produced enormous gaps of wealth and poverty.10

According to political scientist Benjamin Barber, the consumer society drew all the teeth of civic engagement, while the power of advertising, sharply trained on people from their earliest youth, made them perpetual 'kiddults'. That is, at least, for the ones who had the means to consume, for a largely unregulated market

'Democracy' meant rule by elites, who competed within their own circles for the people's votes. The historical content of democracy had been stripped to the bone.

# The stranglehold the business world had over the government of the United States and the lives of its citizens amounted to a totalitarian tyranny.

left big numbers almost penniless and, for shame, many of them the working poor, whom the market deemed unworthy of a living wage.

Joyce Appleby concluded that the Constitution of the United States had much less to do with protecting liberties than with creating a common market. At least that construction suits her anti-political thesis. The modern truth is that the economic world of big businesses takes great stock in controlling the government, largely to prevent it from controlling them or regulating them in turn. Moreover, they profit hugely from corporate welfare, ensuring that the biggest public contracts are placed in the right private circles, and that massive public funds flow their way.

And when the market fails, the government is called upon to rescue them with billions of public dollars, as President Obama did in 2008. The bitter irony in all this is that business persistently assails the competence of government and claims that private enterprise always does it better. 2008 gave the egregious lie to this stand.

Writing just before the outbreak of the Global Financial Crisis, about which he seemed to have incredible foresight, the revered teacher of political theory, Sheldon Wolin, argued that the stranglehold the business world had over the government of the United States and the lives of its citizens amounted to a totalitarian tyranny.12

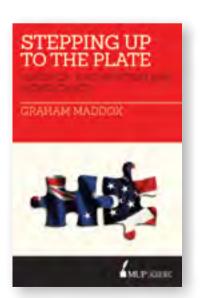
#### A view from Australia

America has always been influential in Australia. From our earliest colonial days Australians looked to the continental United States for inspiration about what continental Australia might one day become. When we federated we borrowed the American federal model, and wrote a rigid constitution partly based on the American instrument. We saturate ourselves in American entertainment, and

often enough in American high culture of literature, art and music. We marvel at American advances in science and technology, and are first in line to adopt the latest devices.

We are also in thrall to American leadership in business. We adopt American techniques in advertising and management, all the while conducting business conversations in American business jargon, which has penetrated our society far beyond business itself. Although, as I say, we have been greatly influenced by American political arrangements, it is far from the whole story. The basics of our polity were drawn from the British inheritance when the first colonial parliaments formed along the lines of the Westminster model. The federal government and Parliament continued on foundations laid at Westminster.

Our colleague at the University of New South Wales, Professor Elaine



# Stepping Up to the Plate. America, and Australian Democracy

#### by Graham Maddox

Western democracies are on the verge of crisis: a rising tide of displaced persons, vast economic inequality, a repudiation of traditional politics.

In the past, the world has looked to the United States for leadership.

In Australia's case our nation was built on the hybrid examples of British and American models of government. Yet in recent years the defensive alliance with America, and more importantly, the intensifying hegemony of American business over Australian economic, social and political life, is forcing changes in our political attitudes.

What is seldom recognised, however, is that American democracy was a myth almost from the start. The American Founders held the majority of their people in contempt, investing their trust in those who had a substantial stake in the country by owning land. They expressly hated democracy, and fashioned a Constitution designed to keep the people at bay.

Stepping Up to the Plate argues that, on this count, the American political system has never been a suitable model for Australia, and recent imported attitudes are seriously undermining the resilient democracy we have evolved over time.

STEPPING UP TO THE PLATE (MUP Academic) is available as an e-book, paperback and hardback from MUP.COM.AU and bookstores.

We were tending to denigrate government in much the same way as they and to swallow the falsehood that private endeavour is always better than public.

Thompson, adopted the colourful term the 'Washminster mutation', and it was she who alerted us to the dangers of increasing Americanization in our political and economic life.13 We were tending to

denigrate government in much the same way as they and to swallow the falsehood that private endeavour is always better than public. More recently, we have almost entirely lost the faith that in a democracy the government is actually intended to be the instrument of the people for their general wellbeing.

This is not to say that the 'Westminster model' was the paragon of all our hopes, and indeed our colonial parliaments of the nineteenth century experimented with democratic advances well beyond the achievements of Westminster itself. Yet there remains a big difference in our political structures from the American.

The Constitution of the United States has been called a 'constitution against party'.14 This ultimately stemmed from James Madison's hatred of 'faction' in an era when 'party' was almost synonymous with it. Of course, democratic influences pressed the formation of parties anyway: the Republican-Democrat Party formed by Thomas Jefferson, which became simply

the Democrat Party under Andrew Jackson, and the Republican Party formed at the time of Abraham Lincoln's emergence. Yet the vaunted separation of powers has stunted their impact on the conduct of

government.

We have seen Donald Trump. from his very first days in office. signing executive orders ('a swipe of the pen from the White House') for presidential acts (Executive Orders) that are not constrained by Congress: advancing the construction

of controversial pipelines; beginning the dismantling of Obamacare; bringing back a ban on international abortion counselling and promising a miserable life for multitudes of 'third world' women; freezing employment in the federal government service; abandoning the Trans-Pacific Partnership on trade cooperation; ordering the building of a wall between Mexico and the United States; banning immigration from racially targeted groups.16

Many would call this elective autocracy.

Such elective authoritarianism is not precluded by Australia's party system, but it brings the votes of our representatives directly to bear on the actions of a government which itself sits in Parliament. That is, the votes of supporters and the Opposition. Ideally, government actions are directly subject to parliamentary scrutiny, and often this works well. However accurate the description, our political parties have been characterised as transmission belts between the public and the government, whereby the government is directly confronted by criticism as well as approval. This does not always work smoothly, but it often does.

The United States Congress has enormous powers, and its legislation can certainly cramp a President's style, as we have seen in recent deadlocks. Clogging the procedures of government does not serve the democratic cause, but opens the field to outside influences, particularly the powerful commercial interests. To carry a legislative program, the President can only request Congress, operating through persuasion, cajolery and rolling out the enormous resources of patronage. The system is open to corruption, and often enough has succumbed.

Thus far at least, our party system has served us much better. We still hold onto the thin golden thread of a feasible democracy. AQ





#### **AUTHOR:**

Graham Maddox is Professor Emeritus of Political Science at the University of New England. He is a Fellow of the Academy of the Social Sciences in Australia, a life member of Clare Hall, Cambridge, and a member of the Center of Theological Inquiry, Princeton. He is author of Australian Democracy in Theory and Practice, 5th edn 2005; The Hawke Government and Labor Tradition, 1989; Religion and the Rise of Democracy, 1996, pb 2015; Stepping Up to the Plate. America, and Australian Democracy, 2016; The Rich Tradition of Republicanism, 2016; and numerous papers on political theory and comparative politics.

IMAGE: © Ted Eytan-Flickr



# **Tall Poppy Campaign**

Investing in Australia's future













- Encouraging excellence and innovation across the sciences
- · Delebrating Young Tall Poppy Scientists nationally
- Reaching out to youth, the public, industry and policy makers
- Building a future leadership of researchers dedicated to public communication and engagement.
- Creating debate and exchange on social impact issues.

The fall Poppy is a metaption for excellence and endeavour. It symbolises Australia's pride in its outstanding achievers in the sciences.





# The Tall Poppy Campaign

Thanks its many generous supporters





Government of South Australia Department of State Development



Australian National University





































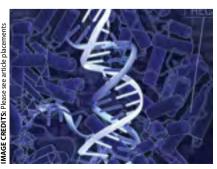












# A Steampunk Vision: Prosumers and Frequency Control

Australia's electricity system is created as a giant rotating mass. Hundreds of fast-spinning turbines are elegantly joined together by three-phase electrical currents twisting along the transmission network – Australia's is the longest in the world. Yet with changing generation methods hooking up to the grid, our old steampunk image of the network is going to have to change. What if greater number of renewables could mean greater grid stability?

**GEOFF JAMES** 

# Land of the Free (Market): The oxymoron of American Democracy

The paradox of democracy is that it is designed to defend the freedoms of all and to subject the government to the legitimate concerns of the people. Yet those very freedoms give licence to those who fundamentally spurn them and threaten the ideals of democracy themselves. The Inauguration of Donald Trump illustrates the paradox. The demonstrations against his accession were greater that the public show of support at his swearing in. What does 'American Democracy' mean to Australia and how can we be more conscious of its influence?

**GRAHAM MADDOX** 

# Open Source Drug Discovery: Global Solutions to Global Problems

Despite phenomenal advances in diagnostics, medical interventions, and therapeutics, universal access to medicines and healthcare has not been realised. While access to curative medicines for diseases such as Alzheimer's or diabetes is limited by progress in research and development, many other diseases are entirely preventable and/or treatable and their continued prevalence is inextricably linked with poverty. How can we achieve equitable global healthcare when disease solutions are so tightly bound to corporate profitability?

ALICE E WILLIAMSON

### Personalised Medicine: More Than Just Personal

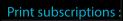
Personalised medicine? What's new about that? Best practice in medicine has always had the patient at its centre. What is new however, is that the most unique and personal information a patient has – that which is contained in their DNA – is available to clinicians. In only a decade, the cost and time of generating an analysis of just one person's genome has reduced from about \$10 million to \$2,000-3,000, and from years to days respectively. The benefits are great, the risks could be greater...

KRISTINE BARLOW-STEWART



With articles on political, economic, social and scientific issues that are relevant to Australian public affairs, AQ is directed towards everyone from university professors to high school students, policy makers & the interested public.

Find out what's really happening now and begin a whole new conversation.



Digital subscriptions:

www.zinio.com www.pocketmags.com

https://aq.magazine.com.au/

www.aips.net.au/aq-magazine