



THE BULLETIN 467

THE ROYAL SOCIETY OF NEW SOUTH WALES

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For Your Diary

- 03 Nov
[RSNSW and Learned Academies Forum 2022](#)
- 14 Nov
[The US Supreme Court: A Rogue Court in a Fragile Democracy](#)
- 23 Nov
[1308th OGM and 2021 Pollock Memorial Lecture](#)
- 30 Nov
[RSNSW 2021 Poggenдорff Lecture](#)



Patron of The Royal Society of NSW
Her Excellency The Honourable
Margaret Beazley AC KC
Governor of New South Wales

RSNSW AND LEARNED ACADEMIES FORUM 2022 Reshaping Australia: Communities in Action 3 November 2022



Date/time: Thursday, 3 November 2022, 9:30 AM–5:00 PM AEDT

Venue: YouTube live streaming from Government House Sydney

Registration: [Register through Eventbrite](#)

Program brochure: Download the [program brochure \(PDF\)](#)

See [page 3](#) for more information

1307TH OGM AND OPEN LECTURE

The Global Economy and Australia's Outlook: Geoff Harcourt's contribution to the theory of productivity growth

Wednesday, 5 October 2022, 6:30 PM AEDT



Dr Don Russell
Chair, AustralianSuper



Ms Jane Drake-Brockman
Visiting Fellow, University of Adelaide



**Emeritus Professor Robert Marks
FRSN**
Emeritus Professor, UNSW Sydney

See [page 4](#) for more information

From the President

One of the key pillars of the Society's [Strategic Plan 2021–2023](#) is building partnerships with a view to sharing expertise, advancing knowledge and contributing to a better future. I highlight two partnerships in this column and invite you to participate in both.

The Royal Society of New South Wales has partnered with Australia's Learned Academies each year since 2015 to stage a Forum in Government House, Sydney, that addresses a complex problem of national importance that can only be solved by linking the expertise in disparate fields of knowledge. This year's Forum takes up the challenge of ['Reshaping Australia'](#) from the point of view of communities in action. The stellar line up of speakers will explore this dynamic in communities and canvass some of the latest research on the factors shaping disparities in social, economic and well-being outcomes for Australians and address four key areas — health, education, infrastructure, and the environment.

Free-of-charge registration to attend the live stream of the event is [now open through Eventbrite](#). We are encouraging anyone interested to gather a group wherever you live or work to watch it together.

The second partnership is between the Society and the Law Society of NSW that features Linda Greenhouse, President of the American Philosophical Society in a public lecture. Linda is a senior research scholar in law at Yale Law School, where she has taught since 2009. For the previous 30 years, she has been the Supreme Court correspondent for The New York Times and won a Pulitzer Prize in 1998 for her coverage of the Court. Her lecture is entitled ['The US Supreme Court: A Rogue Court in a Fragile Democracy'](#). Registration is available through the preceding link.

Those of you who attended the Society's Gala dinner in The Great Hall at the University of Sydney on 24 June this year will have read the birthday message from Linda. It reads as follows: *As president of the American Philosophical Society, the oldest learned society in the United States (founded by Benjamin Franklin in 1743), it is my distinct honor and pleasure to welcome*

the Royal Society of New South Wales to the company of bi-centenarians. In today's world, where evanescence rather than permanence so often seems the order of the day, reaching a 200th anniversary is no small accomplishment. Your history of two hundred years of contribution to human knowledge is to be celebrated — indeed, it is to be cherished. I send greetings to your president, Dr. Susan M. Pond. May our two societies continue to thrive for centuries to come. With my personal best wishes, Linda Greenhouse.



The Society marked with sadness the death of Her Majesty Queen Elizabeth II on 8 September. I thank Davina Jackson, Roy MacLeod and Bruce Ramage for their assistance preparing the message that I submitted via the [online condolence book](#). You will see the message on [page 6](#) in this Bulletin.

The Society cannot function without the committed work of volunteers. We never have enough. A particular gap at the moment is lack of people with skills in media and communications who can help the Society promote its excellent lectures, events and activities on its social media platforms, Facebook, Twitter and LinkedIn, provide regular newsworthy/interesting content of relevance to the membership, and extend the reach of the Society deeper into the community. Please get in touch if you wish to respond to this call to action.

We continue to work for the Society and for NSW because we understand the need to enhance public discourse on a wide range of topics that are crucial to our future. Society members have excellent ideas to contribute. In that spirit, I look forward to hearing your ideas and suggested ways to bring them to fruition.

Dr Susan M Pond AM FRSN
President, Royal Society of NSW



Date: Thursday, 3 November 2022, 9:30 AM–5:00 PM AEDT

Venue: YouTube live streaming (registration required) from Government House Sydney

Program: Download the [program](#), [abstracts](#), and [speaker biographies](#)

Enquiries: [via email](#)

Registration: <https://www.eventbrite.com.au/e/royal-society-of-nsw-and-learned-academies-forum-2022-tickets-420967674647>

The Royal Society of NSW and the Learned Academies acknowledge the generous support of Her Excellency the Honourable Margaret Beazley AC KC, Governor of NSW, the Office of the NSW Chief Scientist and Engineer.

Summary

The tumultuous last decade has witnessed a decline in political consensus and a growing perception that our formal institutions of government have failed to tackle fundamental challenges in areas such as climate change and social inequality.

As the 2022 Federal election demonstrated, many Australian communities, corporations and interest groups have become increasingly active as voices for political change. The ‘Uluru Statement from the Heart’ is one striking example of a community demanding that they be shapers of policy, not just the recipients of what others think should be done.

Such activism builds on a long tradition of community participation in Australia, which has developed a vibrant and extensive not-for-profit sector. There are now more than 50,000 organisations, a million employees and five million volunteers, providing services and support in many areas of our civil life.

These community and volunteer efforts are essential in managing the immediate and long-term impacts of social and environmental crises including catastrophic fires, droughts, and floods. Successful initiatives have involved local communities collaborating with corporations, businesses, research, and government agencies to find innovative solutions.

This year, the Royal Society of NSW in partnership with Australia’s Learned Academies and under the gracious patronage of Her Excellency the Honourable Margaret Beazley AC KC, Governor of New South Wales, will explore this dynamic of communities in action. It will canvass some of the latest research on the factors shaping disparities in social, economic and well-being outcomes for Australians and address four key areas — health, education, infrastructure, and the environment.

The Forum will highlight examples of community collaboration with business, not-for-profit, research, and government organisations to drive meaningful change. It will conclude with a consideration of how greater community participation might impact long-term policy development for the benefit of all Australians.

The Global Economy and Australia's Outlook: Geoff Harcourt's contribution to the theory of productivity growth

Dr Don Russell
Chair, AustralianSuper



Ms Jane Drake-Brockman
Visiting Fellow, University of Adelaide



Emeritus Professor Robert Marks FRSN
Emeritus Professor, UNSW Sydney



Date: Wednesday, 5 October 2022, 6:30 PM
Venue: Gallery Room, Mitchell Building, State Library of NSW

Video presentation: [YouTube video](#)

All are welcome.

Summary

Geoff Harcourt AC FRSN (1931–2021) was a very influential economist, in particular contributing to the profession's understanding of productivity growth with his work on the 'Cambridge controversy'. In this session, two eminent economists, Don Russell and Jane Drake-Brockman, will discuss the global economic outlook, Australia's place in the world, and the issue of lagging productivity growth and lagging wage growth in Australia. Robert Marks, a friend and colleague of Geoff's for 45 years, will attempt to bring Geoff's ideas into the discussion.

About the speakers

Don Russell is currently the Chair of AustralianSuper, Australia's largest superannuation fund. Don has extensive public and private sector experience and served as Australia's Ambassador to the USA in Washington. He was Principal Adviser to the Hon Paul Keating both during his time as Treasurer and Prime Minister.

Jane Drake-Brockman is a Visiting Fellow at the Institute for International Trade at the University of Adelaide and one of Australia's foremost experts on trade in services and digital trade. She has served with the International Trade Centre (Geneva), OECD Secretariat (Paris) and Commonwealth Secretariat (London). A former diplomat, she served for example as Chief Economist with the Department of Foreign Affairs and Trade and as Minister/Charge d'Affaires at the Australian Delegation to the EU in Brussels. She is Founding Director of the Australian Services Roundtable, the peak business body for the services sector, Co-Convenor of the Asia Pacific Services Coalition and Co-Chair of the T20 Taskforce on Trade and Investment.

Robert Marks is an Emeritus Professor in the School of Economics, UNSW Sydney, and since 2016 the Editor of the *Journal & Proceedings of the Royal Society of NSW*. Previously, he was a researcher at the National Bureau of Economic Research, Stanford, and a founding lecturer in the Australian Graduate School of Management, where he edited the *Australian Journal of Management* for 13 years. In 1976 he consulted Geoff Harcourt at the University of Adelaide about future jobs in economics in Australia. In 1987 an algorithm of his won the Second MIT Competitive Strategy Tournament.

Report: Program Committee

by Christina Slade (Chair, Program Committee)
and Lindsay Botten (Webmaster)

In September, there was only a single event held, although significant planning and preparations were under way for the events scheduled for the remainder of this year. The 1306th Ordinary General Meeting and Open Lecture was held online on Wednesday 7 September 2022 and featured a fascinating exploration of the life and journey of Scottish-born artist Ian Fairweather (1891–1974), described by a Sydney art critic as ‘our greatest painter’. In this presentation, titled ‘Is Fairweather an Australian artist? And does it Matter?’, the art historian and curator, Associate Professor Claire Roberts FAHA of the University of Melbourne, in conversation with Nicholas Jose, Emeritus Professor of English at the University of Adelaide, explored Fairweather’s life of wandering (including extended periods living in China, Bali and the Philippines) and his ultimate settlement on Bribie Island off the Queensland Coast, and discussed his repositioning as a key transcultural figure, connecting British, European, Chinese, and Australian art histories. A recording of the presentation is now available on our [YouTube channel](#).

In October, the 1307th Ordinary General Meeting and Open Lecture will be held face-to-face on the evening of Wednesday 5 October in the Gallery Room of the State Library of NSW. The presentation on ‘[The Global Economy and Australia’s Outlook: Geoff Harcourt’s contribution to the theory of productivity growth](#)’ will feature two of Australia’s eminent economists, Don Russell and Jane Drake-Brockman, who will discuss the global economic outlook, Australia’s place in the world, and the issue of lagging productivity growth and lagging wage growth in Australia. Robert Marks, who is the editor of the Royal Society of NSW’s *Journal and Proceedings*, and a friend and colleague of Geoff Harcourt for 45 years, will bring the ideas of Geoff Harcourt into the discussion. For this meeting, as a trial, there will be no charge for attendance, but there will be no catering available on the night. Members and guests who wish to get

together in a convivial setting, either before or after the OGM, are reminded that the [Library Bar](#) is open from 4:00–10:00 PM.

A second event in October, a joint lecture with the University of Sydney Business School, titled ‘A New Way to Wealth: The Role of Social Response Capitalism’ and to be delivered by the New York Times bestselling author Bruce Piasecki PhD, had been planned. Regrettably, due to the ill-health of the speaker and his inability to travel, this event has now been cancelled.

November will be a particularly busy month, with four events scheduled:

- The RSNSW and Learned Academies Forum for 2022 ‘[Reshaping Australia: Communities in Action](#)’ that will be held at Government House Sydney and live streamed on YouTube on Thursday 3 November. Registration for this event is [now open through Evenbrite](#).
- A joint public lecture by the Society and the Law Society of NSW will take place online on the morning of 14 November. The lecture, titled ‘[The US Supreme Court: A Rogue Court in a Fragile Democracy](#)’, will feature the Pulitzer Prize-winning Journalist and President of the American Philosophical Society, Linda Greenhouse.
- The 1308th OGM and 2021 Pollock Lecture, to be held at the State Library of NSW on the evening of Wednesday 23 November 2022, will be addressed by the highly-cited astrophysicist and acclaimed science communicator, Professor Geraint Lewis from the University of Sydney, on the topic ‘[Most of our universe is missing!: Adventures in the dark side of the cosmos](#)’.
- The 2021 Royal Society of NSW Poggendorff Lecture, to be held at the University of Sydney on the afternoon of Wednesday 30 November, will be presented by Professor Richard Trethowan, Director of the Sydney Institute of Agriculture, who will discuss the topic of ‘[A plant breeder’s perspective on food security and climate change](#)’.

(continued)

Please keep an eye out for the email announcements for these events and information about how to register. In all cases, the events will be recorded and made available subsequently on YouTube.

And speaking of YouTube, it is pleasing to be able to report that our channel has now reached a milestone of more than 200 subscribers, and more than 20,000 viewings. Two recordings have had more than 2,500 viewings, a further two have had more than 500

viewings, and a further 13 that have had more than 200 viewings. If you have yet to peruse our channel, please use [this link](#), to cast your eye over the more than 100 videos that are now available, and consider subscribing to the channel.

The event program for the year in [Sydney](#), the [Hunter region](#), the [Southern Highlands](#), and in [Western NSW](#) is also available on the Society's website at the preceding links.

Condolence message

The Council and members of the Royal Society of New South Wales are profoundly saddened by the death of Her Majesty Queen Elizabeth II on 8 September 2022.

From its beginnings in 1821, the Society has enjoyed the gracious co-operation and support of the Crown's representatives in New South Wales. The passing of Her Majesty comes just three months after the year-long celebration of the Society's 200-year anniversary, and 156 years since the Society received Royal Assent from the late Queen's great-great-grandmother, Queen Victoria. We continue to work and share in this honoured tradition, with gratitude and respect.

The reign of Queen Elizabeth II spanned a momentous era in British, Commonwealth and global history. For seventy of her ninety-six years, Her Majesty gave a sense of continuity, constancy,

and commitment to a world often torn and divided. She will be forever remembered for her unwavering dedication and service to her people, to the life and the work of public institutions and voluntary organisations, in the support of the arts and the sciences, and in support of a myriad of cultural traditions that flourish across her realm.

This sad news marks a significant moment in our national history. The loss of the Queen has been deeply felt, and we mourn her passing. At the same time, we trust and believe that her noble example will continue to shape those lives she has touched and inspire many future generations.

Dr Susan M Pond AM FRSN
President, Royal Society of New South Wales

Report: Southern Highlands Branch

by Mike Jonas (Branch Treasurer)

Scattering neutrons to explore the materials found on the dwarf planets of our solar system

Dr Helen Maynard-Casely

Planetary scientist, ANSTO

An audience of 30 braved the atrocious weather to attend Dr Helen Maynard-Casely's presentation to the Southern Highlands Branch. After showing the general organisation and layout of the ANSTO (Australian Nuclear Science and Technology Organisation) site at Lucas Heights, Helen outlined her work in ACNS (Australian Centre for Neutron Scattering) using the high-intensity neutron powder diffractometer, WOMBAT.

Helen described how the high-intensity WOMBAT instrument differed from the high-resolution instrument, ECHIDNA, and also described the differences between single crystal diffraction and powder diffraction, and between neutron scattering and other methods such as X-rays.

As Helen described the huge range of possible uses of WOMBAT, a vision of a whole new world

of research opened up, in which an extraordinary range of properties could be derived from a single neutron-scattering profile — not just the chemical make-up of the substance being studied, but also features like the distances between molecules and internal stresses. A remarkable range of substances have been studied, such as bacteria, minerals, melting chocolate and dinosaur eggs — and distant moons and minor planets in the solar system.

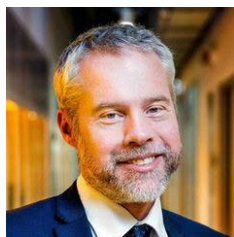
There were no physical samples of material from the moons and minor planets to work with, so the technique was to create a range of materials at a range of temperatures, and to compare their neutron diffraction profiles with direct observations. The findings included, for example, that some of Pluto's surface has a plastic structure, which may help to explain its relative lack of craters. WOMBAT also identified how some of its materials change with the planet's seasons.

Helen concluded by inviting Royal Society Southern Highlands to arrange a group visit to ANSTO which would include a visit to WOMBAT. Several attendees expressed interest in such a visit, so the branch will try to arrange one soon. Information and invitations will be sent out to our emailing list well in advance.

Society Fellow awarded Academic of the Year at Australian Defence Industry Awards

The Council of the Royal Society of NSW warmly congratulates one of its Fellows, **Professor Ben Eggleton FRSN FAA FTSE** of the University of Sydney, on being awarded Academic of the Year at the Australian Defence Industry Awards, held in Canberra in September 2022. Ben Eggleton is the Director of the University of Sydney Nano Institute and co-Director of the NSW Smart Sensing Network (NSSN).

The award recognises the work of Ben and his team at the University of Sydney who have established the



Jericho Smart Sensing Lab, in collaboration with the Royal Australian Air Force, which is developing unprecedented sensing technologies for Australia's defence. This collaboration is delivering nanoscale sensors that can assess physical, chemical, biological, acoustic, and electromagnetic environments. Their ground-breaking technology is being optimised for Australian conditions, including humidity, foliage and other environmental factors that currently pose challenges for airborne sensors.

Further information about the [Jericho Smart Sensing Lab](#) is available on the RAAF website.

Society Fellow Veena Sahajwalla wins 2022 Eureka Prize

The Royal Society of NSW is delighted that one of its Fellows, **Scientia Professor Veena Sahajwalla FRSN FAA FTSE** from UNSW Sydney has been awarded one of the Australian Museum Eureka Prizes for 2022. The Council of the Society warmly congratulates Professor Sahajwalla on her achievement, and on this recognition of the impact of her outstanding research.

Veena Sahajwalla, who was the 2022 NSW Australian of the Year, has won the 2022 Celestino Eureka Prize for Promoting the Understanding of Science. Professor Sahajwalla, a materials scientist, is the

pioneering inventor of a new generation of ‘green’ materials and sustainable products.

Through her rigorous research and extensive community and industry engagement, she is shifting the mindset of the nation to see unwanted materials not as waste, but as a valuable resource.

To read further, please see the [Australian Museum website](#) and the [article in the Sydney Morning Herald](#) from 31 August 2022.



Society Fellows shaping the Australia’s national quantum strategy

Three Society Fellows and Distinguished Fellows have been appointed to the National Quantum Advisory Committee, announced on 22 September by the Minister for Industry and Science, the Hon. Ed Husic MP. The 15-member committee, to be chaired by Australia’s Chief Scientist and Society Distinguished Fellow, **Dr Cathy Foley AO DistFRSN FAA FTSE**, will be ‘an integral part of Australia’s quantum capability across research, industry, and government’.



The other Society members appointed to the Committee are Distinguished Fellow **Scientia Professor Michelle Simmons AO FRS DistFRSN FAA FTSE** of UNSW Sydney, and Fellow **Dr Simon Devitt FRSN** from the University of Technology Sydney.

Professor Simmons, who is the Director of the ARC Centre of Excellence for Quantum Computing and Communications Technology and the Founder of Silicon Quantum Computing recently delivered an address on quantum computing titled ‘[Manufacturing at the atomic scale](#)’ at the August 2022 Ideas@theHouse, presented by the Governor of NSW, Her Excellency the Honourable Margaret Beazley AC KC in collaboration with the Royal Society of NSW.

Dr Simon Devitt FRSN, who is the Research Director for the Centre for Quantum Software and Information at UTS, is an Australian theoretical quantum physicist who has worked on large-scale Quantum computing architecture. He was the winner of the Society’s Warren Prize for 2020.

Further information about the National Quantum Advisory Committee is available on the [Innovation-Aus](#) website.

List of proposed events for 2022

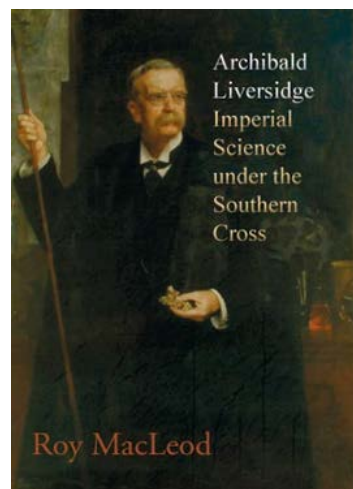
Kindly note that this is a provisional list and will be subject to change, due to the prevalence of COVID-19 during early 2022. Updates will be reflected in future issues of the Bulletin and on [our website](#).

Date	Event
Thursday, 20 October 6:30 PM AEDT	Southern Highlands Branch Meeting 2022-9 Judging a jest: Humour and censorship Dr Jessica Milner Davis FRSN, University of Sydney
Thursday, 3 November 9:00 PM AEDT	Royal Society of NSW and Learned Societies Annual Forum Reshaping Australia communities in action Richard Holden FES FASSA, UNSW; James O'Donnell, ANU; Kalinda Griffiths, UNSW; Maree Teesson AC FAHMS, University of Sydney; Elizabeth Elliott AM FRSN FAHMS, University of Sydney; Sally Redman AO, CEO Sax Institute Sydney; Bernie Shakeshaft, BackTrack Youth Works; David Schlosberg, University of Sydney; Angelica Kross; Louise Adams FTSE, Aurecon; Pasi Sahlberg Southern Cross University; Peter Shergold AC FRSN FASSA, Western Sydney University; Marcia Langton AO FASSA FTSE, University of Melbourne; Ariadne Vromen FASSA, Crawford School of Public Policy <i>et al.</i>
Monday, 14 November 8:00 AM AEDT	Joint RSNSW-Law Society of NSW Public Lecture The U.S. Supreme Court: A rogue court in a fragile democracy Linda Greenhouse
Wednesday, 23 November 6:30 PM AEDT	1308th OGM and 2021 Pollock Memorial Lecture Most of our universe is missing!: Adventures in the dark side of the cosmos Professor Geraint Lewis FRSN FLSW, University of Sydney
Wednesday, 30 November Time: TBA	RSNSW Poggendorff Lecture 2021 A plant breeder's perspective on food security and climate change Professor Richard Trethowan, University of Sydney
Wednesday, 7 December 6:30 PM AEDT	1309th OGM and Open Lecture Topic: to be advised Scientia Professor Rose Amal AC FRSN FAA FTSE, UNSW Sydney

Archibald Liversidge: Imperial Science under the Southern Cross

When Archibald Liversidge first arrived at Sydney University in 1872 as reader in geology and assistant in the laboratory, he had about ten students and two rooms in the main building. In 1874, he became professor of geology and mineralogy; by 1879, he had persuaded the senate to open a faculty of science. He became its first dean in 1882. In 1880, he visited Europe as a trustee of the Australian Museum and his report helped to establish the Industrial, Technological and Sanitary Museum which formed the basis of the present Powerhouse Museum's collection. Liversidge also played a major role in the setting up of the Australasian Association for the Advancement of Science which held its first congress in 1888.

One of his greatest contributions was to science education. He worked tirelessly to secure proper recognition of science in both secondary and tertiary education. In the preface of his book, Professor MacLeod comments: 'Liversidge remained confident that Australia's path would follow the route of the "moving metropolis", strengthened by the bonds that tied Australia to its British heritage. In that heritage lay his life, and through that heritage, flowed the genius of imperial science in New South Wales'. To order your copy, please complete the [MacLeod: Liversidge order form](#) and return it to:



The Royal Society of NSW (Liversidge book)

PO Box 576

Crows Nest NSW 1585

Australia

or contact the Society:

Phone: +61 2 9431 8691

Email: info@royalsoc.org.au

The Society and social media

The Society's presence on social media platforms is slowly but surely growing. Our [Facebook page](#), [LinkedIn channel](#), [Twitter feed](#) and [YouTube channel](#) continue to attract and engage followers and viewers, and we continue to build a repository of online events conducted recently on YouTube.

The icons on the right will take the reader to the platforms' respective pages, from where they can follow and subscribe to the Society, and be notified of new content.



Current Council and Office-Bearers

The current Council and office-bearers of the Society are:

Patron	Her Excellency The Honourable Margaret Beazley AC KC, Governor of New South Wales
President	Dr Susan Pond AM FRSN
Vice-President	Ms Judith Wheeldon AM FRSN
Secretary	Mr Bruce Ramage MRSN
Treasurer	Mr John Cameron MRSN
Librarian	Mr John Hardie AM FRSN
Webmaster	Emeritus Professor Lindsay Botten FRSN
Councillors	Professor Katherine Belov AO FRSN Professor Sean Brawley FRSN Dr Jessica Milner Davis FRSN Professor Philip Gale FRSN Ms Pamela Griffith FRSN Dr Davina Jackson FRSN Emeritus Professor Robert Marks FRSN Emerita Professor Christina Slade FRSN
Hunter Branch Representative	Professor George Willis FRSN
Southern Highlands Branch Representative	Mr Mike Jonas MRSN
Western NSW Branch Representative	Professor Mark Evans FRSN

Editor: [Jason Antony MRSN](#)

THE VIEWS EXPRESSED IN THIS PUBLICATION DO NOT NECESSARILY REFLECT THOSE OF THE SOCIETY.

