

**DEPARTMENT OF PRIME MINISTER
AND CABINET**

**SUBMISSION REGARDING
AUSTRALIA'S POST-2020
EMISSIONS REDUCTION TARGET**

BY

THE CLIMATE STUDY GROUP

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**A NEW VIEW
ON CLIMATE CHANGE**

**INVOLVING THE RELEVANCE OF
BEHAVIOURAL ECONOMICS**

**PSYCHOLOGY, BEHAVIOURAL ECONOMISTS AND
CLIMATE CHANGE**

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ABSTRACT

Recent results in psychology research have made a significant contribution to behavioural economics. The results are also relevant for determination of public policy. On this basis implications for climate policy are reviewed.

Behavioural economists study how people make decisions. Their findings are not only relevant to economics but also to climate policy. Recently there has been increasing interest in behavioural economics and the contribution from research by psychologists. The following draws particularly on the paper by the eminent behavioural economist Prof Matthew Rabin, University of California at Berkeley, titled "Psychology and Economics".¹

Implications of biases described by Rabin, and listed below, are reviewed for their relevance concerning the hypothesis that human activity will cause dangerous global warming (Climate Change).

- We infer too much from too little evidence.
- We misread evidence as confirming a previous held hypothesis.
- People expect too few lengthy streaks in sequences of random events. There is a misperception that purely random streaks are too long to be purely random.
- There is a general inability of people to accurately perceive correlation. Illusionary correlation can play an important role in the confirmation of false hypotheses.
- Once having formed a strong hypothesis people are often inattentive to new information contradicting their hypothesis. There is thus the problem of selective scrutiny of evidence.

These biases identified by psychologists are important for those concerned about Climate Change as discussed below.

- The bias of "**we infer too much from too little evidence**".
 - Regional climate events have been presented as sufficient evidence for global Climate Change. A good example of this is the Garnaut Climate Change Review² of Australian climate where changes in rainfall patterns, droughts and heatwaves are all ascribed to human induced global climate change.

- The bias of “**we misread evidence as confirming a previously held hypothesis**”.

- The current melting of Arctic ice is commonly referred to as confirming Climate Change caused by human activity.

Arctic Ocean variations have occurred in the past and even Greenland was once farmed. In 1922 the US Weather Bureau reported “The Arctic Ocean is warming up, icebergs are growing scarcer and in some places the seals are finding the water too hot. Reports all point to a radical change in climate conditions and hitherto unheard-of temperatures in the arctic zone.” Subsequently the ice cover returned.

These, and other examples, show that Arctic ice cover retreats and advances due to natural variability rather than because of rising industrial CO₂ emissions. Receding ice is not a new phenomenon.

- The bias of “**illusionary correlation can play an important part in confirming a false hypothesis**”.

Using periods of rising temperature and CO₂ to confirm rising CO₂ as the causal factor. There are however a number of observations to contradict this conclusion.

- For example, despite rising CO₂ there was a cooling of the climate during the period 1940 to 1976, National Geographic and Newsweek publications warned that humankind will endure a new Ice Age. Books were written expressing alarm. “The Cooling”, Lowell Ponte’s 1975 book³ on the threat of global cooling, for example, states:

“Global cooling presents humankind with the most important social, political, and adaptive challenge we have had to deal with for 110,000 years. Your stake in the decisions we make concerning it is of ultimate importance: the survival of ourselves, our children, our species.”

Similar alarmist statements have been made after relatively short periods of hot weather and the continuing, although interrupted, warming of the planet since the last Ice Age.

- The world has in fact been warming since the last Ice Age (19,000 years ago) with intermittent exceptions including the Little Ice Age (the period between 1300 and early 1800’s) regardless of CO₂ levels.
- During the earlier Ice Age Northern Europe had a permanent ice cover. England and Ireland were both covered by up to one kilometre of ice. North America, where Chicago is now located, was covered by two kilometres of ice. Sea levels fell by 110 metres.

Ice cores reveal temperatures increased following this Ice Age at least 200 years before CO₂ levels rose. This is contrary to the hypothesis that rising temperature is caused by increasing CO₂.

CO₂ is a greenhouse gas but is clearly subordinate to water vapour and other more significant factors determining global climate.

- The bias of “**there is a misinterpretation that purely random streaks are too long to be purely random**”.

The Millennium Drought starting in 1997 and ending in 2010 was misinterpreted as a long term trend, a consequence of Climate Change. This lent support for the Victorian Government’s over-investment in a desalination plant at that time.

- The bias of “**once forming a hypothesis people are often inattentive to information contradicting their hypothesis. There is the problem of selective scrutiny of evidence**”.

There are a number of observations which have been overlooked and contradict the dangerous global warming hypothesis.

- Regional climate model forecasts of lower rainfall with rising CO₂ have proved incorrect. The Murray Darling Basin is a case in point where rainfall over the past 50 years has increased compared with the previous 50 years despite rising CO₂ levels.
- Global temperature has not increased over the past 15 years despite models predicting it would do so with rising CO₂. Over the same period the predicted increasing frequency of major climate events did not occur⁴.
- The geological record of atmospheric CO₂ and global temperature shows no correlation of rising temperature with increasing levels of atmospheric CO₂.with CO₂ varying from 200 ppm (0.02%) to 7,000 ppm (0.7%) in the atmosphere⁵. (Present level 390 ppm (0.039%).)
- Nor is there any evidence that levels as high as 7,000 ppm of CO₂ did or could cause ocean acidity. The ocean is alkaline and contains minerals in solution which constrain any lowering of alkalinity with rising CO₂. People exhale breath containing near 50,000 ppm CO₂ (5.0%). Media programmes that show exhaled breath can eventually turn a glass of sea water acid are both irrelevant and misleading.
- During the period 1940 to 1976 there was a cooling of the climate despite increasing CO₂ levels.
- Over the past one million years climate cycles ranging from Ice Ages to warmer periods have been caused by changing levels of energy from the sun, planetary alignments and ocean currents. These three important climate determinants have not been included in computer models currently being used

and they are not well understood. The models therefore cannot with any confidence predict future climate. It is not surprising that all temperature predictions by these models over the past fifteen years have been inaccurate by a considerable margin.

The three variables will continue to determine the onset and intensity of the next Ice Age. With record cold and snow recently in parts of the USA people there might be concerned that “The Cooling” may have already commenced.

- Carbon in fossil fuels was formed from vegetation that captured CO₂, a plant nutrient, from the atmosphere. There was no dangerous global warming prior to this CO₂ being taken from the atmosphere, as evidenced by the subsequent abundant forest and plant growth, and there is no reason to believe there would be if it were returned.

It is also relevant that there were a number of Ice Age climate events before CO₂ was sequestered in fossil fuels.

- The increase in atmospheric methane, a greenhouse gas, in the latter part of the 20th century was explained as coming from expansion of grazing and rice cultivation, but the cause was found to be leaking gas pipelines in the Soviet Union which are now being properly managed and maintained.

Global methane levels published by CSIRO are now relatively stable showing fluctuations during El Nino events. This negates the case for reducing methane from grazing animals for environmental reasons and the substantial expenditure on the research involved.

Because of the above bias errors the hypothesis of dangerous global warming caused by human activity has not been substantiated by evidential science.⁶ Thus a contrary claim of human activity being a causal factor for dangerous global warming must necessarily be an incorrect statement.

It follows, that the case for the costs involved to mitigate CO₂ emissions is without foundation and the resources required should be made available to sectors of the economy in need of urgent attention.

In the book “Nudge” the authors, Thaler & Sunstein,⁷ have recommended the employment of the findings of behavioural economics be used to “nudge” people to do what “choice architects” think would be in people’s best interests. In the UK a Behavioural Insights Team has been appointed by the Government to do so.

Referring to CO₂, a transparent and trace gas, as carbon, a black and dirty solid, is a good example of a “nudge” to sway public opinion in favour of reducing CO₂ emissions and the heavy economic cost involved.

The book refers to the need to address the anthropogenic global warming hypothesis for the benefit of society. The heading for the relevant chapter in “Nudge” is titled “Saving the Planet”.⁸ This heading and other such claims are calculated to raise fear and anxiety. Both are well documented conclusions of research by psychiatrists as means

to facilitate conversion of people to a desired belief without the benefit of evidence, see “Battle for the Mind” by William Sargant.⁹ They are means available to “choice architects” and people promoting the need to address Climate Change.

It is relevant that Mr. Cass Sunstein, a co-author of “Nudge” was appointed as advisor to US President Obama as a behavioural economist. Mr. Obama in a recent speech to the Nation expressed alarm about Climate Change threatening the future outlook for our children and grandchildren. Again there is a message to cause fear and anxiety without empirical scientific evidence.

It is significant to note the alarmist global warming hypothesis and the means proposed to meet the perceived challenge appeal to those who believe government should have a greater role in controlling business and private behaviour. In 2010, Democrats in the USA were twice as likely to believe the alleged danger of Climate Change compared with Republicans.¹⁰

Of Climate Change alarm it has been said, “there is something going on here and it’s not science” - a conclusion supported by the bias errors outlined in this paper. In addition, there have been statements about climate warming which instill fear and anxiety making it difficult for many to form a view on Climate Change based on empirical evidence.

This paper has explained how people, despite good intentions, may be influenced by bias. Economists have now had to review long held economic models which did not take into account how bias can influence human behaviour.

Climate scientists also have to address the implications of this new insight revealing bias errors that call into question recommendations for CO₂ emissions reduction. The outcome would be crucial for development of Government policy.

Recommendation

In the context of the analysis in this submission of psychological research and new revelations of how bias can affect decision making, the Authors of this submission recommend the case for reduction of CO₂ emissions is not well founded and certainly no Australian post-2020 emissions reduction target could be justified.

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