Spinning straw men

when science writing goes wrong

Media have been complicit in spreading dissident views around climate change, a movement which has set global efforts to address the problem back by two decades. ***Leonie Joubert****, author of* Scorched: South Africa's changing climate, *considers whether all facts should be considered equal.*

The story was to science journalism what the marmalade-dropper is to hard news: so astonishing that it pauses the reader's breakfast toast mid-air, long enough for the marmalade to slide right off. A KwaZulu-Natal newspaper stated that a retired scientist in the Midlands could show that shifting climate patterns are not manmade and that his groundbreaking work could earn him a Nobel Prize. The scientist claimed that only the northern hemisphere was warming, for natural reasons, in a rhythm that was consistent with the "golden ratio" of 0.618.

Penning the story was the editor of a small-town rag who failed his professional obligations on two counts: firstly, he didn't check whether the scientist's work had been subjected to basic peer review required of the academic process; and he swallowed whole a gimmicky pseudo-scientific notion which has been convincingly debunked by mathematicians years ago.

The golden ratio is a description of a geometric relationship between parts of a line that has been divided in a specific way: divide a line so that the full length of the line (A+B) relates to the longer segment (A) just as (A) relates to the shorter segment (B).

Since the Greeks, many have claimed to see this 0.618 ratio in the spiral of shells, plant shapes and population dynamics. It supposedly informed the architecture of the Egyptian pyramids and is evident in art, literature and even music.

Mathematician George Markowsky in his paper *Misconceptions about the Golden Ratio* dismissed these ideas, writing that while the "mathematical properties are correctly stated, (its presence) in art, architecture, literature and aesthetics is false or seriously misleading".

Fortunately the newspaper's readership is small enough for the article not to cause too much damage, but this case is a caricature of the larger problem of the media's complicity in spreading dissident and often scientifically false views regarding global warming.

Dr Guy Midgley, a key South African author on the United Nations Intergovernmental Panel on Climate Change (IPCC) *Fourth Assessment Report* released earlier this year, said denialism around climate change has set world efforts to curb global warming pollution back by 20 years.

The problem runs deep into the bedrock of journalistic objectivity. In order to appear fair and balanced, journalists must present both sides of an issue. When that issue is, for example, the national utility's plan to roll out several nuclear power stations as part of the country's "energy mix", then it is responsible to quote the original source of the information as well as seek comment from opposition parties and civil society organisations.

However when the story addresses the latest climate change predictions as presented by the IPCC earlier this year, seeking objectivity is then often

interpreted as finding a climate change dissident and quoting this contradictory voice. Doing so reflects a fundamental misunderstanding of where the scientific community is at – because it has moved beyond asking *if* climate change is happening and is now probing *how fast* it is happening. The scientific community is 90% certain that half of all warming witnessed in recent decades is due to human activities on the planet. Scientific language allows for a margin of error, so to claim 90% certainty means the community speaks with a high degree of confidence.

Quoting a dissident in this case, as one 702 reporter did by "balancing" comment from Dr Guy Midgley with contradictory views of outspoken sceptic and energy expert Andrew Kenny, is like rounding off a story on the calculation of the Earth's girth by quoting a Flat Earth-er.

News convention is also partly at fault. "News" is inherently something that is new and possibly out of the ordinary. A journalist will look for a new angle to a tired old story of climate change. The dissident movement, whether organised or not, has survived by perpetuating the notion that the scientific community is not in agreement about climate change science. A few mavericks, having cherry-picked the facts they need to support their alternative views, emerge from the background noise of consensus on the subject. And the media – always on the lookout for a fresh or alternative spin on things – might be tempted to latch onto this apparent story.

A 2004 article in the journal *Science* stated that an examination of nearly 1 000 scientific papers showed that "none disagreed with the science of global climate change – but in a similar sample group of newspaper articles, over 50% showed that there was some doubt about whether climate change is caused by us".

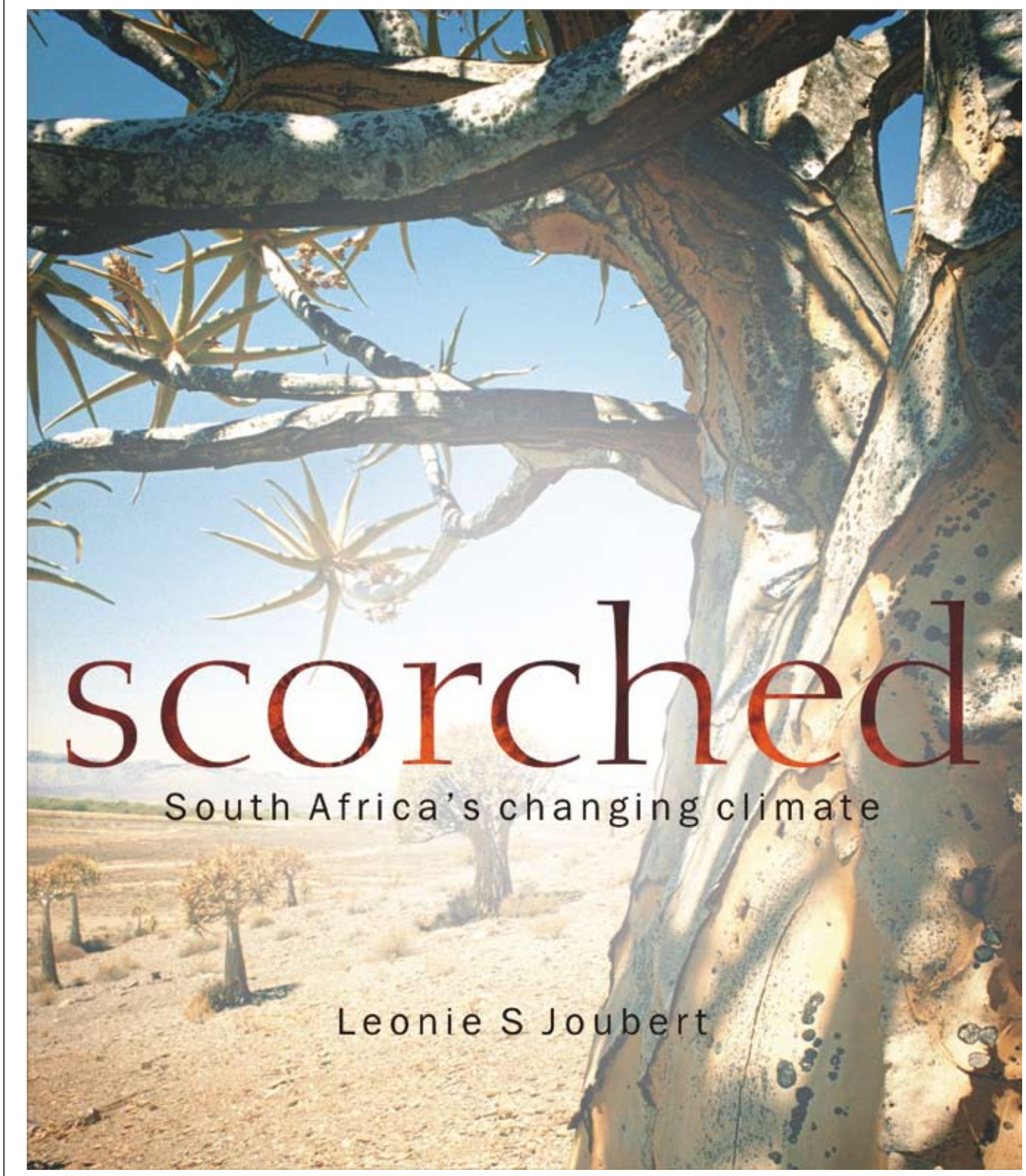
Journalists find themselves in something of a quandary here, since their obligation is to give space to legitimate ideas in order to fulfil the role of informing the public. Meanwhile they must remain the critical gatekeeper, vetting information so that some semblance of truthfulness is achieved.

In the case of the dissident spin on climate change facts, one can borrow rather crudely from George Orwell's *Animal Farm*: all facts are equal but some facts are more equal than others.

In a world where science becomes increasingly specialised and complex, the need for skills development is clear so that journalists are able to separate the legitimate facts from those which have been corrupted by agendas.

Sociologist Massimiano Bucchi speaks of the widening "knowledge gap" between the public and science over the past three centuries. The professionalising and disentanglement of science from the public and general culture, he said, has been "accompanied by the creation of new channels of communication between specialists and non-specialists". Science writers therefore must be able to invest time in deepening their understanding of the subject so they can become more than manipulated observers of the apparent "he said, she said" debate as dissidents and the consensus view scramble for column inches.

Science is not democratic – the existing consensus view does not deserve more media coverage because more people agree with it but rather because evidence-based science supports it. In light of this, journalists must decide whether a handful of maverick voices deserve the airtime, simply because they disagree with the thousands of other scientists worldwide who are convinced by the existing evidence.



Denialism around climate change has set world efforts to curb global warming pollution back by 20 years... and the problem runs deep into the bedrock of journalistic objectivity

Leonie Joubert's book, *Scorched: South Africa's changing climate*, received an honorary award from the 2007 *Sunday Times* Alan Paton Non-Fiction judges. Travel writer Don Pinnock describes *Scorched* as "a wonderful, stimulating read... mostly because of Leonie's puckish, metaphoric and often poetic style of writing". Duncan Butchart of *WildWatch* remarked that *Scorched* is engaging and quirky. "Meticulous in its research, the information is presented in a refreshing and surprisingly humorous style – better, even, than Tim Flannery (author of *The Weather Makers*) or Al Gore." Joubert has been published in the *Sunday Independent*, *African Decisions*, *Africa Geographic*, *Getaway*, *Progress*, *EarthYear*, *Farmers Weekly*, *Engineering News*, *Cape Times*, *SA4x4*, *Xplore* and the *Mail&Guardian*.

In 2005 she co-authored the new Environmental Management Plan (EMP) for the Prince Edward Islands Special Nature Reserve.

Her regular science column for *Wine News* earned a Merit Award in the SAB Environmental Journalists of the Year Awards 2006, Print Media category, "in recognition of an outstanding contribution to the field of environmental journalism".

She has a Bachelor of Journalism and Media Studies from Rhodes University and a Masters in Journalism from Stellenbosch University.

She has been appointed the 2007 Ruth First Fellow at Wits University for which she is working on an investigation into climate change and vulnerable communities in South Africa.