

INDEPENDENT THINKING IN AN UNCERTAIN WORLD

A Mind of One's Own



Edited by
VALERIE A. BROWN, JOHN A. HARRIS
and **DAVID WALTNER-TOEWS**

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"This important and stimulating book argues that we are capable of bouncing ourselves out of locked-in ways of thinking, ways of thinking unhelpful at best and catastrophic at worst. The book's bold ambition gives us the concepts and language to navigate the perilous new epoch of the Anthropocene."

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"Creatively and persuasively, this book demands an opening-up and a freeing of our modes of thinking and dialogue. In a world of ever-more pressing challenges, this is a powerful anthem for the emergence of the multidimensionality and mutual respect we will all need to live comfortably with each other and with non-human nature."

— *Melissa Leach, anthropologist and Director,
Institute of Development Studies,
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"Post-Normal Science is required whenever facts are uncertain, values disputed, stakes high and decisions urgent. It is gratifying to me that the authors have found the ideas of Post-Normal Science illuminating for steering us through this uncertain world. From this book I have gained a deeper insight into what Post-Normal Science can mean for the future."

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Northern British Columbia, Canada*

Independent Thinking in an Uncertain World

Any effective response to an uncertain future will require independently thinking individuals working together. Human ideas and actions have led to unprecedented changes in the relationships among humans, and between humans and the Earth. Changes in the air we breathe, the water we drink and the energy we use are evidence of Nature – which has no special interest in sustaining human life – looking out for itself. Even the evolutionary context for humans has altered. Evolutionary pressures from the digital communication revolution have been added to those from natural systems. For humans to meet these challenges requires social re-organization that is neither simple nor easy.

Independent Thinking in an Uncertain World offers workable, field-tested strategies from the frontiers of creating a viable future for humans on Earth. Based on research results from hundreds of social learning workshops with communities worldwide, many of them part of Australian National University's Local Sustainability Project, authors with diverse interests explore the gap between open-minded individual thinking and closed socially defined knowledges. The multiple dimensions of individual, social and biophysical ways of thinking are combined in ways that allow open-minded individuals to learn from one another.

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Foreword

Jerome R. Ravetz

I feel that it is an honour and a privilege to contribute a foreword to this inspiring volume. It is very gratifying to me that the authors have found the ideas of post-normal science to be illuminating. And from them I have gained a deeper insight into what post-normal science can mean.

First, of course, this volume records the multiple achievements of Valerie Brown in creating new conceptions of the way we think and act, individually and collectively. She has not only achieved new insights and described them; equally importantly, she has embodied them in practical methods for their further development and use. Of course, any simplified scheme can be abused in a box-ticking culture; but when such a scheme expresses deep truths about a system, it can enrich and even transform practice. Her list of the dimensions of mind, deployed in conjunction with her list of varieties of actors, provides participants a means of achieving self-awareness. Thereby, as she and her co-editor John Harris know so well, the most intractable obstacle to creative common endeavour, the inability to see oneself from outside, can be overcome. In that way, the most important task facing our civilization, the employment of nonviolence in policy, can be achieved. This, I believe, is the great achievement of this volume.

Articulating an enriched, complex vision of oneself in society is challenging. Contradictions and hurts are everywhere. We can carry on better when we see how others have overcome them, both in group work and internally. My friend, comrade and mentor David Waltner-Toews is a living example of that struggle. His histories of successful campaigns, together with personal reflections and poetry, all integrated in his personal vision, show us that it can indeed be done; and that integrity and hope can indeed be maintained through the inevitable messes of actions to make the world a better place.

Kerry Arabena provided a precious occasion for me to reflect on myself and my work. It started with her focus on the vision of nature of indigenous peoples; this could be described as including all the dimensions of mind in Valerie Brown's scheme, where the aesthetic and sympathetic are as essential as the physical and where historic crimes are part of the present and future. From this perspective, the poverty of 'normal science' suddenly becomes clear. We could think of it as the social perception of a world where everyone is colour blind, tone deaf and afflicted by anosmia and ageusia. In policy terms, one can think of words used in South Africa during the debate on ending apartheid: those willing to change were *verligte*, enlightened, while the opponents were *verkrampste*, cramped. At the extreme, there is the old joke about science having disproved the existence of consciousness, with the obvious exception of white male Harvard psychology PhDs. This is the implicit indoctrination of students in all officially certified sciences. It prepares them to believe that they can manage and change the world in that benighted image.

Now I better understand the significance of post-normal science. Less important are the mantras describing the condition. The essential message is: yes, it can be different.

Science can encompass diversity, variety, love and hate and tragedy. Doing real-world science can and must involve conflict and reconciliation and knowledge of self and others. Kerry's term 'post-normal reconciliation' expresses the spirit of post-normal science as I have now come to understand it; it is to be distinguished from the 'normal' sort whereby those oppressed Others have a chance to become real imitation white folks.

I need not go on at length at the other contributions to this volume, particularly those about the practical experience of the farmers. One might say that a key feature of modern societies is the way that they provide a shield and buffer from the workings of the external world. For the last half-century, ever since *Silent Spring*, it has been common knowledge that our science cannot totally dominate Nature. And on an increasing variety of fronts, our technological successes are realized to be producing their own negations, as with superbugs and superweeds. On the American Great Plains, the Ogallala aquifer is being pumped dry, with a future lifetime estimated as a few decades. Perhaps the name will last longer than the expropriation? It could be that in Australia, where the most sophisticated governance and technology confronts a very alien ecosystem, vital lessons about conservation and regeneration will have a better chance of being heeded. Our authors should be recognized eventually as heroes of survival; and perhaps they will.

Finally, I want to recognize the other achievement, the one that made all this collective work possible: the Fennel Writing Group. Although this was not about science, it was clear that same inspiration, which I am now honoured to call 'post-normal', made it such a success.

Thanks to the authors and particularly, of course, to Valerie Brown, for their achievement and for giving me the opportunity to share in it and learn from it in this way.

Prologue

The bat cave

John A. Harris

This is my story of living through the very changes in thinking that are at the heart of this book. Growing up in the foothills of Adelaide, South Australia, with a permanent creek flowing past my home, it seems inevitable that I would fall in love with natural things. And, once my curiosity was sparked, I wanted to understand more about how my tiny world fitted into the larger world. To fulfil my dream I went to Adelaide University and became a practising scientist. I began to think for myself. I had my first inkling of what this meant during my PhD research in a bat cave.

Bats are true flying mammals. In my case, they were like tiny flying mice. They lived in the bat cave by day and left to feed on insects at night. By their presence, they altered the cave temperature and created an environment of their own. I studied a small inner chamber where I entered the chamber through a low crawl space by torchlight. If bats were roosting there, they brushed past me as they left. Understanding the interrelationships between the bats and the cave was the key to unlocking the secrets of the cave. It was also the key to understanding the human world and myself.

The bat cave had seemed to be a simple system in a stable temperature 'laboratory'. However, this idea had more to do with my scientific thinking. I had misunderstood the

interrelationships in the cave, as I had failed to understand my own social system. It was only after I began to think for myself that my mind was set free and open to learn from these mistakes.

Drawing on my own thinking allowed me to see how the bat cave exemplifies the extraordinary diversity generated by the evolutionary process of life on Earth; a process that included my own thinking. The bat cave demonstrated the ever-changing character of the Earth. This was my first inkling of a new order in my mind. It took me more time to know intuitively that I was a part of that interdependent world. I was working late one night when, suddenly, I felt connected to the whole of life on Earth. It brought a powerful emotional response.

These flashes of insight came to me when I was grappling with a tension created by the conflict between my commitment to objective science and my mind-changing experience in the cave. I abandoned the goal of a quantifiable understanding. Instead, I worked tirelessly to sort out the confusion in my mind. It was that sustained focus and attention that helped free my mind, allowing all dimensions of my thinking to fire and flash. I got much better at working creatively, using my intuition and imagination as well as my scientific training, and to use them all together.

When I set out on my PhD, I was a research scientist focused on objective thinking about the physical and biological conditions in the bat cave. To gain access to the cave, I needed the help of my social colleagues, local cave enthusiasts and landholders. My love for natural systems led me to a new ethical position: to reduce the extent of my disturbance to the bats and to increase my responsibility to my society. This led me to developing sympathy for the tiny bats and so for other vulnerable beings. I realized how much I had become a part of the system I was

studying. I had experienced my mind being able to use its physical, social, ethical, sympathetic and aesthetic dimensions and remaining whole at the same time.

The bat cave changed me forever. I found myself in a new story about my place in the natural and social worlds and the interdependence within and between these worlds. For years, I thought that was the story of the bat cave. It took me a long time to realize that was my story, too. The bat cave had allowed me entry to multidimensional thinking. I see my tiny world as multifaceted and whole at the same time. This is an enduring story and it runs through this book.

It is a story of the world I fit into, for better or worse. It is not only complex and beautiful; it generates a vast natural and cultural variety. There is a capacity for renewing the panoply of planetary life in unexpected and sustaining ways that are beyond my powers of understanding. Nevertheless, my journey to understand has brought me to the strength of the multiple dimensions of an individual mind and this book.

Part I

Ideas



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Thinking for oneself

Outside the square

Valerie A. Brown

Every now and then a new idea spreads throughout human society. The collected thinking of the world slips a cog while it absorbs the new idea into its everyday life. We humans have already faced the dramatic changes of the agricultural and industrial revolutions. Both of these permanently altered the relationships that link individual humans, their societies and the Earth. A revolution of our own times brings with it the challenge to establish new long-term collaborations between humans and humans and between humans and their only planet. For this, we look to a mind fit for the task.

Just this morning, my social media carried pictures of a warming planet: a free-floating iceberg as big as a small city, ice sheets crisscrossed with large cracks and a starving polar bear. The President of the United States, the most powerful man in the world, tweets that the world is getting cooler. Facebook's founder moans that his wonderful tool is being used to service a confused world of 'alternative facts'. Floods and droughts predicted for over 30 years still catch people unprepared. Refugees from intolerable living conditions are shunted from place to place, with no foreseeable solution. Governments fail to face up to the extent of the social and environmental change. I, as an individual, am left to interpret this complex world for myself.

There is no shortage of confident explanations of this complexity. Professions, disciplines, political parties and people in the street all have their own versions. More important is to ask, what is the question? Nobody seems to be sure. There is, however, one question that I keep asking myself. In these uncertain times, why aren't we drawing on the immense capability of our own minds? Some people are singled out to give us the answer, some as geniuses, some as powerbrokers, others as heroes. The rest of us are expected to leave the too-hard questions to them. As human beings, however, they are no different from any of us. We all have the same brain structure and ability to think that allows us to think for ourselves. To go back to a question about the question: How can we draw on the full capacity of our minds in addressing the issues of our time?

Climatologist Will Steffen has argued that the formal title for our time in history should be the Anthropocene. The 'Anthro' part is a reminder that human ideas have led to unprecedented changes in our social lives and physical environment. Changes to the air I breathe, the water I drink and the energy I generate are our environment's response to human actions. These changes are not primarily addressed to us humans: They are the Earth looking after itself. As an individual, I must respond on my own behalf, hoping to find companions to help me. However, to address the necessary social reorganization will be neither simple nor easy. I cannot do it by myself: It is too vast a canvas.

Once I applied my mind to the emergent issues, I could see for myself the crucial need to negotiate our way to the solutions, solutions that we can all share with one another and with the world. Otherwise we will all continue to be deaf to this changed world speaking in its own voice. The Earth will activate its own feedback systems whether

we like it or not. We need to learn to listen. Communities do the best they can with the resources they have. Worldwide experience of working with changing communities has taught me that there will always be those who try to avoid the issues of the Anthropocene. Others will take a one-eyed view, fixing their minds on one problem and one solution. Belief in one right answer can lead to a single source of authoritarian control. At one extreme, this singlemindedness leads to the mass Jonestown suicides and the terrors of the Nazi regime. At the other, it produces individuals alienated from their own society. The planet has been dealing with immense changes over many billion years. Whether we humans act wisely on the issues or not, the planet will survive. Unless we can escape our society's current focus on one right answer, we humans may not.

After working with communities all over the world, I came to realize that existing organizational structures and current ways of thinking could not be expected to break new ground. They have established interests to protect. This often means that they work actively to prevent change. Why should I be surprised? Key social institutions such as education, law, health and government have been building walls around themselves ever since the 17th-century scientific revolution. Thinking has shrunk to considering only one's own section of the social network. As I have described in previous books, in Western culture our knowledge making has been divided into different specialized compartments, each of which protects itself from change.

The communities I was working with were looking for whole-of-community change. In the next chapter, Chapter 2, I give an account of the research team, design and overall outcomes of a series of collective learning workshops. Here, I describe the steps toward learning to

recognize multiple dimensions in each individual's thinking. I was leader of the Local Sustainability Project (LSP) at the Australian National University over 1990–2015, responding to issues of whole-of-community change. Our research teams found that the Local Sustainability Project workshops were successful in bringing diverse groups together on shared tasks. However, when the workshop members went back to their usual social environment, it was a different matter. The old barriers returned. It made me think of the proverb: You can take a horse to water, but you can't make it drink.

During the early workshops the team identified different knowledge cultures developed by individuals, communities, specialists, organizations and holistic thinkers. Each knowledge culture had its own aim, language, content and set of practitioners. To my surprise, the crucible for significant change did not arise from any one of the knowledge compartments. Rather, change came from certain individuals who stood out in each of the workshop groups. These individuals acted independently of their colleagues and thought more broadly across the issues.

Following this unexpected behaviour, the research team and I redesigned the workshops. The aim of the new workshops was to learn more about the individual's desire for independence and their capacity to think beyond the square. In debriefing sessions after a workshop, members of the research team and of the groups identified different dimensions of the individuals' thinking: the physical, social, ethical, aesthetic and sympathetic dimensions of their individual minds. The *physical* dimension was accessed through objective observations and measurements; the *social* dimension by shared stories and symbols; the *ethical* dimension by action on moral principles; the *aesthetic* dimensions by recognition of patterns and style; and *sympathetic* dimensions in the warmth of one-on-one communications.

The recognition of multidimensional thinking demanded further investigation. Once recognized, I began to find signs of the multiple dimensions of mind everywhere. I was in the position of someone who buys a red car and then suddenly sees red cars everywhere, when they had never noticed them before. Once the multiple dimensions of mind had been identified in the workshops, I found these multiple dimensions whenever independent individuals were thinking for themselves. In Chapter 2, I explore the relationships between the closed minds of the knowledge compartments and the open minds of independent thinkers. For now, I report on some examples of the value of the contributions made by multidimensional minds to difficult times (see Box 1.1).

BOX 1.1 A REGION IN CRISIS

A remote region in Australia's far north was suffering a severe drought. Drought is usually associated with a lack of rain, a meteorological drought, a physical measurable dimension. But social life is hard to carry on when the view out the window is red dust and empty paddocks. Politicians and city people focus on the images of dying cattle and sheep, failing to understand that everyone in these remote rural communities is affected. Yet the sense of place is strong as local people love the aesthetics of the red sand hills and open spaces of the region where they live. They are also strongly connected, sympathetic to one another's problems and with a strong ethical tradition for helping one another.

The impacts of drought on the whole region has been devastating. Everyone in this remote community was affected. Farmers and their children,

(Continued)

shearers, fencing contractors, hairdressers and local grocery stores suffered an economic drought, as no money comes into the town. A social drought developed as large numbers of people leave town looking for work. Services decline, schools close; sports clubs struggle to find enough people for a team.

Nevertheless, people changed the way they did things and diversified their businesses. Local people volunteered to keep social events happening. Local charity groups provide credit cards for people to spend locally. Innovative local businesses developed in response to drought, often based on people's love of the area. One cattle family turned tourism operators take visitors on a Cobb and Co coach ride, providing a genuine heritage experience. Strong social capital and networks helped. Individuals wore many hats, volunteering with Rotary, the Drought Committee, helping the homeless, working in schools and sitting on the hospital board.

Comment: Paradoxically, the needs of remote regions are often ignored; yet distance gives them freedom to consider their own and other's perspectives and to think and act outside the square. Independent thinking is especially valued in times of hardship, such as this drought in Longreach, where people were able to access all dimensions of their minds.

Source: Kelly, 2018

The many failures of orthodox methods to resolve the issues of the Anthropocene: carbon emissions, violence in the cities and the obesity epidemic, had already made me wonder whether there was another way. From the LSP workshops, I collected a list of possible ways of responding to the complex issues (see Table 1.1).