

# Tū Arohae

# Tū Arohae Inter- disciplinary Critical Thinking

**WILLIAM FISH AND STEPHEN DUFFIN**



MASSEY UNIVERSITY PRESS

# Contents

**Introduction**

7

## **Part I: Reasoning**

13

**1.1**

**Reasoning and other  
modes of persuasion**

15

**1.2**

**The elements of  
reasoning**

23

## **Part II: The Structure of Reasoning**

43

**2.1**

**Marking reasoning**

45

**2.2**

**Mapping simple  
inferences**

54

**2.3**

**Reasoning with three  
statements**

64

**2.4**

**Real-life arguments**

79

## **Part III: Evaluating Reason**

109

**3.1**

**Evaluating inference  
strength**

111

**3.2**

**Evaluating premise  
plausibility**

128

**3.3**

**Digging deeper into 'factual'  
premises**

143

## **Part IV: The Big Picture**

163

**4.1**

**The taken for granted**

165

**4.2**

**Frames and framing**

178

**4.3**

**When ideologies  
and facts collide**

190

**Appendix**

202

**References**

219

**About the authors**

221

# Introduction

In 2015, the College of Humanities and Social Sciences at Massey University made the decision to institute a new core curriculum for all students enrolled in its Bachelor of Arts qualification. Part of the rationale for this decision was to ensure that all students who graduate with a BA from Massey University possess a suite of transferable skills that would help them achieve not only during their university course, but also throughout their subsequent careers. In light of the value that employers place on critical thinking skills, the college included a dedicated critical thinking paper in the new core curriculum. Later that year, the two of us took on the task of developing this paper — Bill serving as overall coordinator of the paper, and Steve as lecturer in charge of both the internal Manawatū and Distance offerings.

Although Steve had for a number of years taught a critical thinking paper that was housed in the philosophy programme, developing this course required us to take a fresh look at what we were going to teach. Not only did the paper have to develop foundational critical thinking skills that would be useful in both academic and vocational contexts,

it also had to do so in a way that would feel connected to the studies of all BA students, no matter which of the 25 or so majors they might be taking. Numerous colleagues from across the college helped us to understand the many different connotations that the notion of critical thinking had in humanities and social science disciplines. We would like to thank all of our colleagues who contributed to this process — in particular: Bill Angus, Glenn Banks, Emily Beausoleil, Andrew Brown, Tony Carusi, Stephen Chadwick, Ross Flett, Marg Forster, Hannah Gerard, Beth Greener, France Grenaudier-Klijn, John Griffiths, Gerald Harrison, Rand Hazou, Jim Henman, Simon Herbert, Stephen Hill, Nick Holm, Kat Holt, Ian Huffer, Rebecca James, Andrew Jamieson, Darryn Joseph, John Matthewson, Peter Meihana, Negar Partow, Peter Petrucci, Russell Prince, James Richardson, Adriane Rini, Linda Rowan, Gina Salapata, Vanessa Schouten, Richard Shaw, Gillian Skyrme, Paul Spoonley, Philip Steer, Rochelle Stewart-Withers, Sy Taffel, Veronica Tawhai, Kerry Taylor, Elspeth Tilley, Christopher van der Krogt, Bryan Walpert, Krystal Te Rina Warren, Krushil Watene and Geoff Watson. Nicola Legat at Massey University Press and editor Matt Turner also read complete versions of the manuscript and offered extremely valuable and detailed comments and suggestions. If we have missed anybody, please accept our apologies and trust that it is due to a failure of memory on our part, rather than a lack of gratitude.

The result of this process was a new, interdisciplinary critical thinking paper that is not only significantly different to the paper that we had offered in the past, but also, we believe, superior. To make this new way of approaching critical thinking available to the widest audience possible, we decided to write a book based on what we learned. We hope you enjoy reading it as much as we enjoyed developing it.

William Fish and Stephen Duffin  
October 2017

# PART ONE

# Reasoning

**T**hroughout your life, people will try to convince you of a mind-boggling array of things, from the mundane — which brand of fabric softener to buy, what movies to see, where to go on holiday — to the critical — which school to send your kids to, which governments should be overthrown, what kinds of people should be allowed into your country.

In many of these cases, people will try to persuade you to do something or believe something by providing you with reasons to do/believe it. So should you be persuaded? Should you find the reasons they give compelling?

These are important questions, and questions that we ask ourselves — whether we realise it or not — every day of our lives. Given this, everyone can benefit from equipping themselves with a set of precision tools that can be used when called upon to evaluate reasoning. That is why we wrote this book: to give you a critical-thinking tool box that will be useful in day-to-day life, in academic study (no matter what the discipline), and in the workplace (no matter what the job).

First, however, we would like to say something about the book's title.

We want you to possess critical thinking skills; but being critical is not always seen as a good thing. If you were to look up the word in a thesaurus, one of the synonym groups you would find aligns being critical with being judgemental, nit-picking, disparaging and unsympathetic. In this sense, we might describe someone as being 'critical' if they have a tendency to make negative judgements about people, or to find fault with unimportant issues. Being critical in this sense is normally considered an undesirable characteristic.

But this is not what we mean when we talk about critical *thinking*; here, being critical is a matter of being judicious and careful. People who think critically in this sense should not be confused with people who judge and criticise. For the purposes of this book, being a critical thinker is contrasted with being a credulous or gullible thinker — one who is too ready to believe what they are told just because they are told it. So as critical thinkers our aim is not to criticise the person who is presenting a particular claim, but to ensure that we carefully and judiciously evaluate the reasons why they are making a particular claim before deciding whether or not to be persuaded by them.

In this section, we set out to explore the core idea of reasoning and its use as a form of persuasion. We begin by investigating how persuasion involving reasoning differs from other forms of persuasion, and we look at where reasoning can be found. We then move on to look at the different elements that make up a piece of linguistic reasoning.