

Cantonese tone-variation for cognitive defusion and the role of psychological flexibility in university students

Author

Ms. Shelly Kin Shan LEUNG
Registered Clinical Psychologist
The University of Hong Kong
ACBS HK Chapter
Email: shelly64@connect.hku.hk



Co-author

Prof. Frenzi Wing-sai LI
Associate Professor of Practice
The University of Hong Kong

Introduction

Cognitive defusion is a key aspect of Acceptance and Commitment Therapy that aims to decrease the believability of thoughts. It involves various techniques that target different levels of language and thought, from basic properties of language and thought to process of thinking (Hayes & Strosahl, 2004).

Research by Masuda et al. (2009) showed that word repetition exercises were superior to control interventions in reducing the believability and emotional discomfort associated with self-relevant negative thoughts.

Limited research has been done on cognitive defusion techniques in the Chinese language. Techniques developed in the West to reveal the automatic nature of language may need to be adapted for the Cantonese population

Objectives

This study focused on the effectiveness of a newly designed Cantonese cognitive defusion technique in reducing the believability and discomfort from self-critical thoughts. In this study, a newly devised cognitive defusion technique using Cantonese tone variations was tested in terms of its efficacy in reducing distress and believability of self-relevant negative thoughts in university students with severe mood and stress symptoms.

Hypotheses

1. The believability of self-relevant negative thoughts would decrease after using cognitive defusion techniques.
2. The degree of discomfort of self-relevant negative thoughts would decrease after using cognitive defusion techniques.
3. The newly devised Cantonese tone-variation cognitive defusion technique could decrease the believability and degree of discomfort compared to control group.

Methodology

Phase I Screening:

- Depression Anxiety Stress Scale- 21 (DASS-21)
- Self-Compassion Scale (SCS)

Eligibility for Phase II experiment:

- Severe to Extremely Severe in either one of DASS-21 scales (Stress, Anxiety, Depression)
- Low self-compassion (below cut-off 2.75) as reflected from SCS

Phase II experiment:

- Cognitive Defusion - Rapid Word-Repetition (Group 1)
- Cognitive Defusion - Cantonese Tone-Variation (Group 2)
- Distraction Control Group (Group 3).

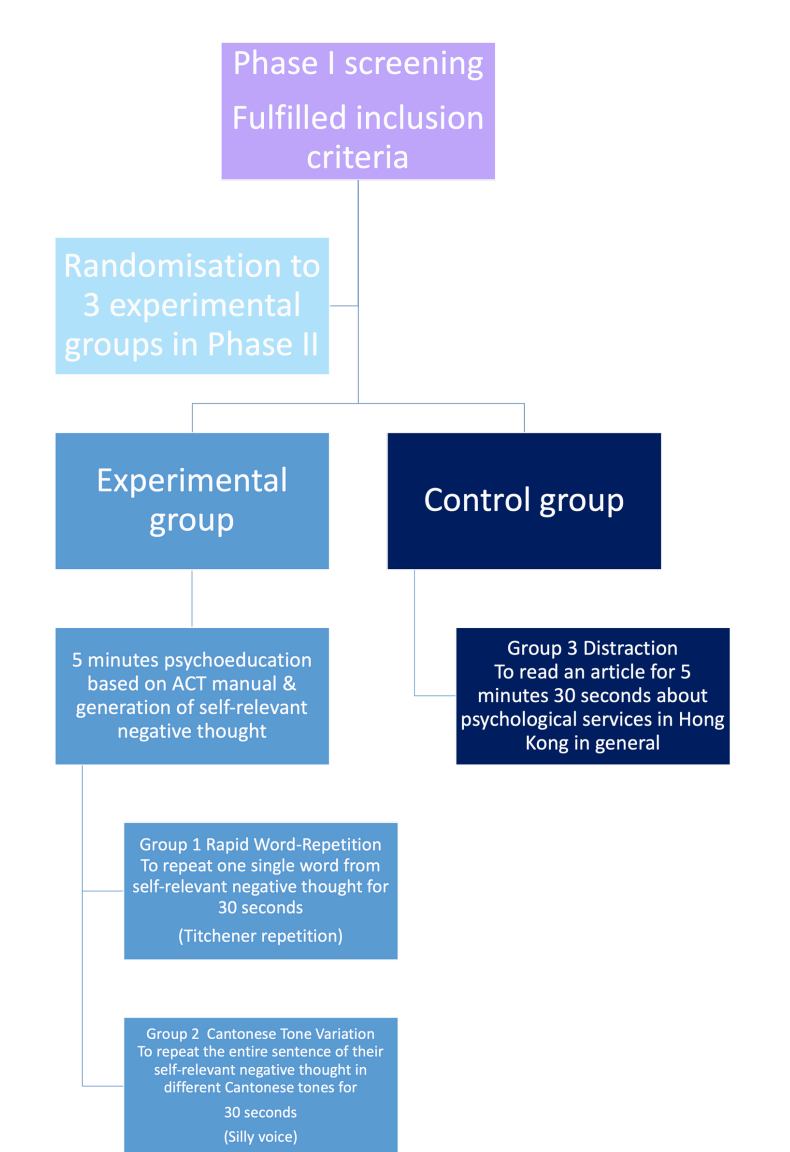
Experiment

Pre-experiment:

- To generate two target self-relevant negative thoughts, which were extremely believable, negative, uncomfortable.
- The sentence should be formed by no more than six Chinese word characters.
- Participants were asked to rate their believability and degree of discomfort of the negative thoughts in a 0-100 Likert scale.

Post-experiment:

- Participants were asked to rate their believability and degree of discomfort of the selected negative thoughts in a 0-100 Likert scale, followed by debriefing of the experiment.



Results and Analysis

All analyses were conducted using SPSS Statistics Version 23 for Mac. ANCOVA was used to study the relationship between the three group conditions, with the post-intervention measure (believability or distress) of negative thoughts as dependent variable, pre-intervention measure (believability or distress) of negative thoughts as covariate and group condition as fixed factors.

Experimental Outcome Analysis. The means and standard deviations on target thought before and after experimental procedures (cognitive defusion or distraction) were presented in the Table 2 below. The believability and distress of the target thoughts were all above 70/100 before the experiment indicating high believability and high distress level.

Distress of the target thought.

There was no significant difference between Group 1 and Group 2 on the change in distress level ($p = 0.071$). Both Group 1 and 2 showed a significantly greater reduction in distress of the target thought than control ($p < 0.05$).

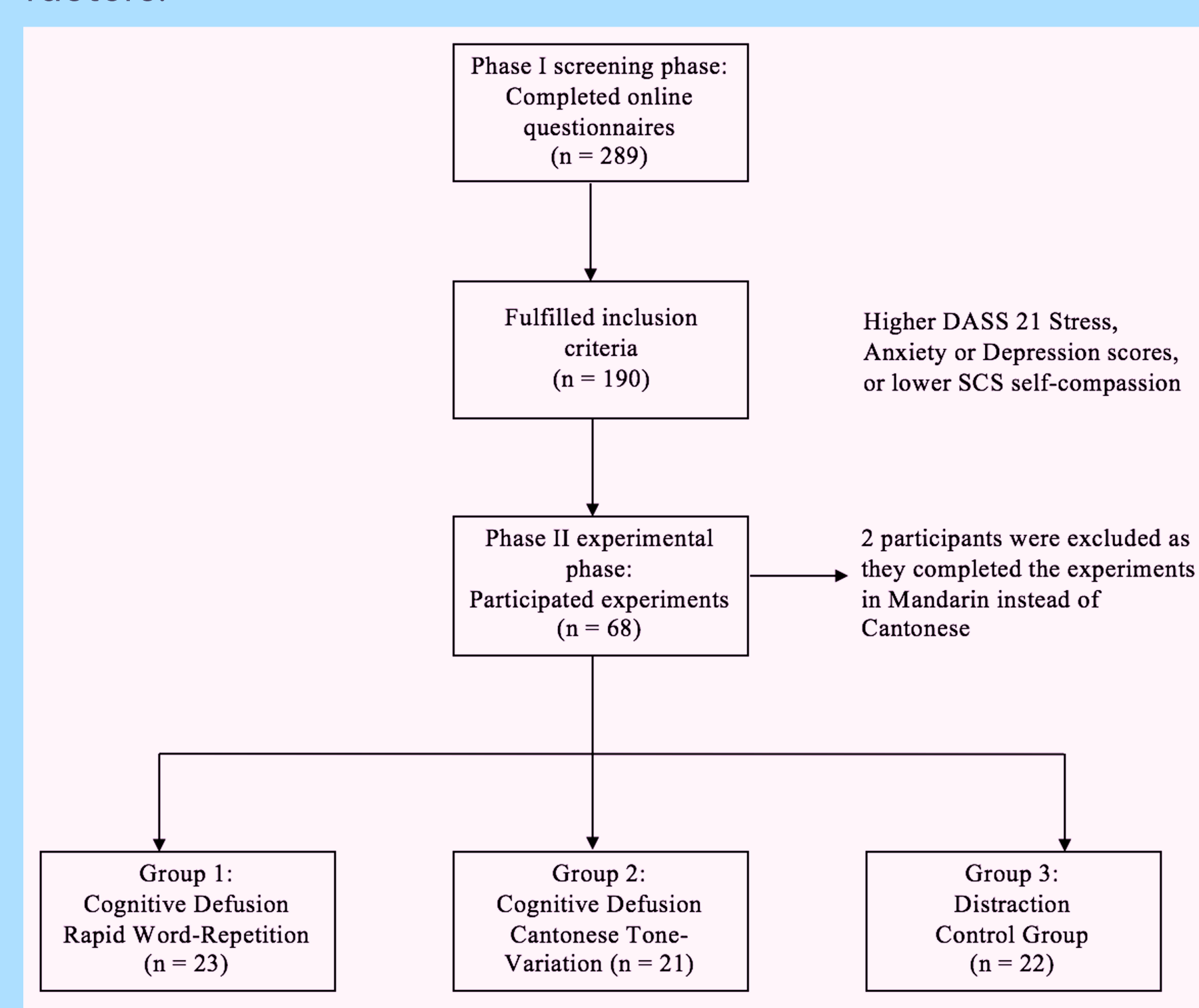


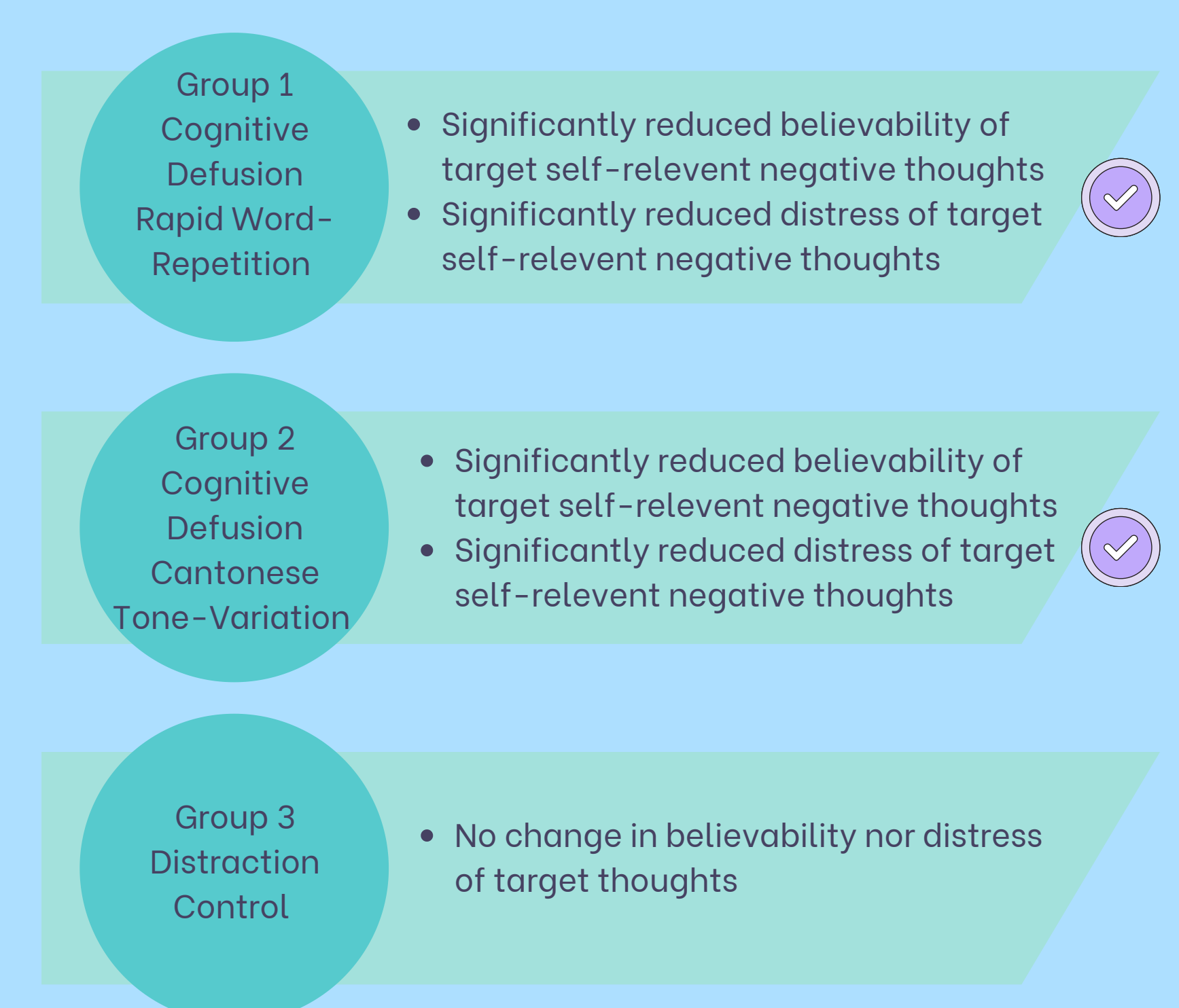
Figure 1: Flowchart of screening and experimental phases

	Group 1: Cognitive Defusion - Rapid Word-repetition (n = 23)		Group 2: Cognitive Defusion - Change of Cantonese Tones (n = 21)		Group 3: Distraction Control group (n = 22)							
	Pre	Post	Pre	Post	Pre	Post						
Target Thought	M	SD	M	SD	M	SD	M	SD	M	SD		
Believability	79.35	14.41	67.17	18.64	77.62	18.55	60.71	23.09	81.55	19.13	81.55	18.94
Distress	77.26	16.74	57.61	17.38	84.29	12.68	50.67	22.37	84.82	13.55	79.36	19.59

Table 2: Summary of Pre- and Post-Scores of the Level of Believability and Distress on Target Thought

Believability of the target thought.

Results from univariate analysis of variance suggested that there was no significant difference between Group 1 and Group 2 ($p = 204$) on the change of believability. Both Group 1 and Group 2 achieved a significantly greater reduction in the believability of the target thought than control Group 3 ($p < 0.05$).



Conclusion

From our experiments, the newly devised cognitive defusion technique using Cantonese tone variations was as effective as the established rapid-word repetition technique (Titchener, 1916) in reducing the believability and distress level of self-critical thoughts compared to the control distraction group.

The results suggested the following implications:

- Firstly, the newly designed cognitive defusion technique of changing Cantonese tones was equally able to deliteralise negative thoughts that one fused with.
- Secondly, the established cognitive defusion of rapid repetition of word that was well studied in western ACT literatures (e.g. Masuda's cognitive defusion studies (2009) was proved to have its significance in Cantonese population.

References

1. Hayes, S. C., & Strosahl, K. D. (2004). A Practical Guide to Acceptance and Commitment Therapy. Springer Science & Business Media.
2. Masuda, A., Hayes, S. C., Twohig, M. P., Drossel, C., Lillis, J., & Washio, Y. (2009). A parametric study of cognitive defusion and the believability and discomfort of negative self-relevant thoughts. Behavior Modification, 33(2), 250-262.
3. Titchener, E. B. (1916). A Text-book of Psychology. New York: MacMillan.