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"I have goals and plans to achieve them". An online survey of the career perceptions of trainee and practising educational psychologists

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Contemporary career literature indicates that careers are becoming less traditional and two new career concepts, boundaryless and protean career orientations, help provide insight and understanding. A third concept is career adaptability, which is also essential for individuals to maintain personal flexibility. The current study investigated whether or not these new concepts of career applied to educational psychology students and practicing educational psychologists. Results indicated that both students and practicing psychologists held boundaryless and protean attitudes, with a preference for mobility, breaking organisational boundaries, and using personal values for career guidance. Data also showed a high degree of career adaptability, with qualitative data suggesting that participants combined contemporary career attitudes with aspects of the traditional career. They understood the hierarchical opportunities available to them but also favoured innovative new endeavours.

Keywords: educational psychologists, trainees, career perceptions, adaptability, protean and boundaryless attitudes

It has been suggested that millennial graduates will be "the first in history to fail to exceed the economic success of their parents" (Hall & Mirvis, 1996, p.19). Graduates are likely to have non-traditional careers because the supply of and demand for graduates and graduate positions has become unbalanced (King, 2003). New perceptions of career have been established which reflect both the instability of modern work arrangements and opportunities for independent career management.

Theorists such as Cappelli (1999) and Friedman (2007) have suggested that the world of work is changing to such an extent that the kinds of work people do and the way they are doing it have been transformed, indicating that graduates today are entering a different kind of workforce than in the past. Many of the observed changes in career are associated with shifting economic, political, technological, and socio-cultural environments (Buchner, 2007) which have a profound effect on how people make sense of their careers (Rousseau, 1995). Against this background of a rapidly changing economy and society, researchers have been developing new models to explain the career attitudes of workers today. This has given rise to the boundaryless and protean career concepts as two ways of describing how people make sense of their career. Changes to the traditional career and psychological contract have led to interest in individuals as "agents of their own career destinies" (Inkson & Baruch, 2008, p. 217) and to concepts of boundaryless and protean careers, as well as career adaptablility.

The Boundaryless Career

The boundaryless career does not describe a single career form, but rather a range of possible forms which are different to those found in the organisational career. The boundaryless career may involve cycles of upskilling, with more lateral than upward moves (Mirvis & Hall, 1996). A career agent enacting a boundaryless career may (Arthur & Rousseau, 1996):

1. Move across boundaries of different employers
2. Draw marketability and validation from outside the present employer
3. Sustain their career by external networks or information
4. Break organisational career boundaries
5. Reject current work opportunities for personal or family reasons, or
6. Believe they have a boundaryless future despite the existence of structural constraints.

The Protean Career

The protean career is driven by the individual rather than the company, involving individually created goals encompassing one's whole life, and being motivated by psychological success rather than external markers of accomplishment (Hall, 1996; Hall & Moss, 1998; Mirvis & Hall, 1996). The protean career involves understanding success as developing as a whole person, rather than viewing performance as the main criterion for success. A career is an ongoing reinvention of oneself (Inkson, 2006), involving a personal identification with meaningful work (Bridgstock, 2005) and requiring adaptability for learning demands and performance (Briscoe & Hall, 2006). The protean career consists of all of an individual's experiences in training, education, work, and movements between jobs (Hall & Moss, 1998) and is a shift of focus from 'work self' to 'whole self' (Hall & Chandler, 2005).

Baruch (2006) suggests that the protean career flourishes in the boundaryless career environment but is supressed in the traditional career system. The protean career is thought to relate to self-direction, adaptability, identity, and values while the boundaryless career relates to proactive boundary-crossing.

Career Adaptability

Adaptability means being able to change fairly easily to fit new or changed circumstances. Career adaptability is essential for individuals in all stages of their career because in a non-linear and fluid work context, individuals are required to hold personal flexibility and the ability to cope with changing work environments and other life transitions. Career adaptability is also a focal point in career counselling theory and practice (van Vianen, De Pater, & Preenan, 2009), and plays an important part in graduates' career development (Zhang, 2010).

Types of Career Profile

Briscoe and Hall (2006) suggest there are eight main types of career profile based on boundaryless and protean career attitudes. By overlapping protean and boundaryless categories, Briscoe and Hall (2006) created 16 possible combinations for career orientation. Each combination represented a career profile that was low or high in four areas: being values driven and self-directed (relating to protean orientations) and psychological and physical mobility (relating to boundaryless orientations). They noted that some of these combinations may not be likely to occur in the natural environment, so further analysed the possibilities to determine eight combinations which have a medium or high chance of occurring. The eight types of career profile according to Briscoe and Hall (2006) are presented in Table 1 in a simplified form.

Table 1
Protean and boundaryless combinations: Career profiles

Protean: Self-directed career management	Protean: Values driven	Boundaryless: Psychological mobility	Boundaryless: Physical mobility	Hybrid category/archetypes
Low	Low	Low	Low	"Lost" or Trapped"
Low	High	Low	Low	"Fortressed"
Low	Low	Low	High	"Wanderer"
Low	High	High	Low	"Idealist"
High	Low	High	Low	"Organization man/woman"
High	High	High	Low	"Solid Citizen"
High	Low	High	High	"Hired gun/hired hand"
High	High	High	High	"Protean career architect"

What are the promises and limitations of the Boundaryless and Protean career ideas?

Boundaryless Career

Inkson (2006) suggests the term 'boundary-crossing career' as a more accurate alternative to 'boundaryless career'. Hall (2002) concludes that modern careers are not completely boundaryless and Baruch (2006) suggests that the quality of being boundaryless is best presented on scale, ranging between two extremes: total order and total chaos. Baruch (2006) states that many firms still apply well-established management practices and that even in the traditional mode, psychological contracts were not completely rigid. Given these different perspectives, it could be suggested that ideas about career are shifting along the continuum, but will never reach either extreme, as both organisational and boundaryless ideas will always be relevant.

Protean Career

As discussed by Gubler, Arnold, and Coombs (2013), the protean career concept is widely acknowledged as a new career idea, but empirical analysis of the model is scarce. Contributing to this paucity of research is the fact that writers disagree about what constitutes the protean outlook. Due to the emphasis on self-direction in the search for psychological success, some scholars have suggested that the protean career in fact involves a contract between oneself and one's work, rather than with the organisation (Hall & Moss, 1998). Briscoe and Hall (1996) suggest that a person's perception of their career can involve a greater or lesser degree of protean orientation, similar to an attitude. In this way, the protean career can be understood as a mind-set, reflecting self-direction, freedom, and choice-making based on personal values.

Significance of the present study

The current study is important as it explores changing career concepts among both practicing psychologists and graduate students about to transition into the world of professional psychology. Vocational guidance research has produced new insights regarding students' interests and decisions when choosing a tertiary course (Borges, Savickas, & Jones, 2004), but there have been far fewer studies focusing on the career choices made by students in higher education as they approach graduation (Cassin, Singer, Dobson, & Altmaier, 2007). Few studies focus on professional guidance and the interests of students transitioning from undergraduate to graduate studies, particularly in areas such as psychology and medicine (Ferreira, Rodrigues, & da Costa Ferriera, 2016). Understanding the perspectives of students on the cusp of entry to the profession can help to ensure that newly qualified professionals are being trained in a way that prepares them for success (Benes & Mazerolle, 2014). The present study was an opportunity to examine these perspectives, to compare the career profiles of both practicing psychologists and students about to enter the field, and to examine the extent to which they were aligned in terms of the potential difficulties of a limited job market.

Research Questions

Question 1: To what extent do postgraduate educational psychology students and educational psychology professionals hold boundaryless and/or protean career attitudes?

Question 2: To what extent do postgraduate educational psychology students and professionals endorse career adaptability?

Question 3: Do the responses to boundaryless and protean survey items fit with the eight career profiles?

Methodology

Participants

The respondents were approximately one-third students (22 respondents) and two-thirds psychologists (45 respondents). Student participants were enrolled either at

University A (72.7%) in the Master of Educational Psychology programme or University B (27.3%) in the Postgraduate Diploma of Educational Psychology programme. The majority of practising psychologists were employed by the Ministry of Education (72.3 per cent); 20 per cent selected 'other', referring to non-governmental organisations. Almost half of the psychologists had been in practice for one to five years (46.7 per cent).

Measures

Briscoe, Hall and Frautschy DeMuth (2006) used factor analysis to determine the four different aspects of career attitude targeted by the measure. These were: protean self-concept; protean values-driven attitude; boundaryless mindset; and organisational mobility. The present study used these factors as the basis for data analysis. The survey included questions (see Table 2) on several different factors, based on factor analyses done by Briscoe et al. (2006).

Table 2
Boundaryless and protean career attitude scale items

Factor 1: Boundaryless mindset
1 I enjoy working with people outside of my organization
2 I enjoy jobs that require me to interact with people in many different organizations
3 I enjoy job assignments that require me to work outside of the organization
4 I like tasks at work that require me to work beyond my own department
5 I would enjoy working on projects with people from across many organizations
6 I have sought opportunities in the past that allow me to work outside the organization
7 I am energized in new experiences and situations
8 I seek job assignments that allow me to learn something new

Factor 2: Mobility preference
9 If my organization provided lifetime employment, I would never desire to seek work in other organizations R
10 In my ideal career, I would work for only one organization R
11 I would feel very lost if I couldn't work for my current organization R
12 I like the predictability that comes with working continuously for the same organization R
13 I prefer to stay in a company I am familiar with rather than look for employment elsewhere R

Factor 3: Self-directed attitude
14 I am in charge of my own career
15 Ultimately, I depend upon myself to move my career forward
16 I am responsible for my success or failure in my career
17 Where my career is concerned, I am very much "my own person"
18 Overall, I have a very independent, self-directed career
19 In the past I have relied more upon myself than others to find a new job when necessary
20 Freedom to choose my own career path is one of my most important values
21 When development opportunities have not been offered by my company, I've sought them out on my own

Factor 4: Values-driven attitude
22 I'll follow my own guidance if my company asks me to do something that goes against my values
23 In the past I have sided with my own values when the company has asked me to do something I don't agree with
24 What I think about what is right in my career is more important to me than what my company thinks
25 It doesn't matter much to me how other people evaluate the choices I make in my career
26 I navigate my own career, based upon my personal priorities, as opposed to my employer's priorities
27 What's most important to me is how I feel about my career success, not how other people feel

R = reverse-scored items

Career adaptability was assessed using items from the Career Futures Inventory-Revised (CFI-R; Rottinghaus, Buelow, Matyja, & Schneider, 2012). The CFI was first developed by Rottinghaus et al. (2005), and measures career adaptability, career optimism, and perceived knowledge of the job market. The updated CFI (CFI-R) has 28 items and five scales, including: Career Agency, Negative Career Outlook, Occupational Awareness, Support, and Work–Life Balance. The different sections of the present survey (see Table 3) are based on factor analysis by Rottinghaus et al. (2012).

Table 3
Career adaptability scale items

Factor 1: Career Agency (CA): Perceived capacity for self-reflection and forethought to intentionally initiate, control, and manage career transitions
28 I can adapt to change in the world of work
29 I understand my work related interests
30 I am aware of priorities in my life
31 I can establish plans for my future career
32 I am aware of my strengths
33 I am in control of my career
34 I will successfully manage my present career transition process
35 I understand my work-related values
36 I can overcome potential barriers that may exist in my career

Factor 2: Negative Career Outlook (NCO): Negative thoughts about career decisions and belief that one will not achieve favourable career outcomes
37 I doubt my career will turn out well in the future
38 It is unlikely that good things will happen in my career
39 I lack the energy to pursue my career goals
40 Thinking about my career frustrates me

Factor 3: Occupational Awareness (OA): Perceptions of how well an individual understands job market and employment trends
41 I am good at understanding job market trends
42 I keep up with trends in at least one occupation or industry of interest to me
43 I keep current with job market trends
44 I keep current with changes in technology
45 I understand how economic trends affect career opportunities available to me
46 I do not understand job market trends

Factor 4: Support: Perceived emotional and instrumental support from family and friends in pursuing career goals
47 My family is there to help me through career challenges
48 I receive all the encouragement I need from others to meet my career goals
49 Others in my life are very supportive of my career
50 Friends are available to offer support in my career transition

Factor 5: Work-Life Balance (WLB): Ability to understand and manage responsibilities to others across multiple life roles
51 I am good at balancing multiple life roles such as worker, family member, or friend
52 I am very strategic when it comes to balancing my work and personal lives
53 Balancing work and family responsibilities is manageable
54 I can easily manage my needs and those of other important people in my life

There were also four qualitative questions in the survey. One asked respondents if they held a two, five, or 10-year plan and what that may involve. A qualitative follow-up question was also included after three of the Likert-scale items. The questions were:

1. *Do you have a two, five, and/or 10 year career plan? If so, please provide some indicative commentary about your short (2 year), medium (5 year), or long-term (10 year) career plans.*
2. *You have indicated that you enjoy working with people outside of your organisation. Why is that?*

3. *You have indicated that you are responsible for your success or failure in your career. Why is that?*
4. *You have indicated that what is most important to you is how you feel about your career success not how other people feel. Why is that?*

Ethics Approval, Recruitment, and Informed Consent

The research study was granted ethical approval by Massey University Human Ethics Committee, application number 4000015409. Consent procedures were followed whereby respondents were provided with information sheets and made aware of the voluntary nature of the research. Responses were anonymous, as invitations were sent to groups of possible participants who followed a web link to the survey. The questionnaire did not include any questions which could lead to respondents being identified, and the survey software did not collect this information automatically either.

Procedure

A request for participation was sent by e-mail to present students and students from three previous years. Practising psychologists were invited to participate through the EdPsych forum and a request for participation was sent to Ministry of Education psychologists. The invitation emails included the participant letter with key terms, contact details for the researcher and supervisors, and the ethics application number. If respondents chose to participate, they clicked on a web link which took them to the survey. There were 64 items on the survey in total (4 demographic questions, 4 open-ended questions, and 56 items from Briscoe & Hall, 2006 and Rottinghaus et al., 2012), and completion of each item was optional. Survey Monkey collected the results, which were exported in SPSS format for analysis.

Data Analysis Method

Responses for the boundaryless, protean and adaptability items were analysed using SPSS and multivariate analysis of variance (MANOVA). Analysis included comparison of students and psychologists, psychologists from different workplaces, and psychologists with more and less experience. The Negative Outlook items from the adaptability scale were reversed scored, as was done by Rottinghaus et al. (2012). The qualitative questions were coded according to emerging themes in the responses.

Results

This chapter reports on the findings collected from the survey and is divided into two sections. First the quantitative results will be presented. Then the qualitative results will be presented.

Part 1 - Quantitative Data

Boundaryless and protean career attitudes

Both students and psychologists gave similar responses for boundaryless and protean attitudes . A MANOVA showed no difference between the two groups on any items, λ=.99, F(4,50)=.02 (see Table 4).

Table 4
Student and psychologist scores for boundaryless and protean attitudes

Factor	Group	N	Mean	SD
Boundaryless mindset	Students	16	4.11	.61
	Psychologists	40	4.12	.52
Mobility preference	Students	16	3.60	.67
	Psychologists	40	3.59	.72
Self-directed attitude	Students	16	4.06	.58
	Psychologists	39	4.07	.49
Values-driven attitude	Students	16	3.75	.68
	Psychologists	39	3.71	.57
Across factors score	Students	16	3.98	.38
	Psychologists	39	3.87	.37

Career Profiles

The results were also analysed in relation to Briscoe and Hall's (2006) career profiles. To create these categories, participant responses were divided into higher or lower scores on each of the four main factors that Briscoe and Hall (2006) used. Participants in the higher group for the boundaryless and protean questions were those whose mean score for the various questions indicated that they agreed or strongly agreed. Those in the lower group were those who either were neutral or disagreed. Participants were then classified according to the eight profiles. For example, someone who was lower for all four factors (psychological mindset and physical mobility for boundaryless and self-directed or values driven for protean) was categorised as 'lost/ trapped'. These results are shown in Table 5.

Table 5
Participant results according to the eight career profiles of Briscoe and Hall (2006)

Profile	Participants
Lost/Trapped	5
Fortressed	0
Wanderer	11
Idealist	2
Organisation Man/Woman	4
Solid Citizen	1
Hired Gun	3
Career Architect	5
Total	31

The results of the profiling showed that 31 out of 55 (56%) of the total sample could be classified into the eight profiles. Separate analyses of career profiles were carried out for subsamples of the total group of participants: psychologists only, students only, Ministry psychologists, and Non-Ministry psychologists. These breakdowns showed similar patterns of response to those of the total sample.

Career Adaptability

Students and psychologists showed strong indications of career adaptability (see Table 6). The MANOVA showed no significant difference between the two groups, λ=.10, F(5,47) =1.01 on these measures.

Table 6
Students and psychologists adaptability scores

Factor	Group	N	Mean	SD
Career agency	Students	14	4.3492	.43
	Psychologists	39	4.1567	.47
Negative career outlook	Students	14	4.1429	.36
	Psychologists	39	3.9423	.51
Occupational awareness	Students	14	3.3214	.56
	Psychologists	39	3.2650	.43
Support	Students	14	4.4107	.64
	Psychologists	39	4.0000	.62
Work-life balance	Students	14	4.1071	.67
	Psychologists	39	3.9038	.64
Across factors score	Students	14	4.0663	.30
	Psychologists	39	3.8536	.36

Part 2 - Qualitative Data

Working with others (boundaryless mindset)

Question 1 in the boundaryless mindset section asked whether the respondent enjoyed working with others outside the organisation. This item was followed by an open-ended question: "You have indicated that you enjoy working with people outside of your organization. Why is that?" Gaining different perspectives and learning from others were popular reasons for respondents endorsing this item. Respondents often detailed the ways they can engage in these learning opportunities, such as acquiring new skills, sharing information, interacting with people from different knowledge bases, networking, and making the most of others' strengths and expertise (see Table 7).

Table 7
Question 7: Student and psychologist responses

Theme	N	%	Example
Gain different perspectives	15	28.3	"Variety and different exposure and perspectives"
Learn from others	15	28.3	"Having an understanding of what other psychs and organisations are doing is useful for my job"
Diversity makes the job interesting	6	11.3	"It makes the work rich an interesting"
Using multidisciplinary approaches	6	11.3	"Our work is enhanced by multi-disciplinary approaches"
Enjoy collaborative work	4	7.5	"I have always liked inter-professional collaborative work"
Better outcomes	4	7.5	"They have different skills and experience that can contribute toward improved outcomes"
Diversity of thinking	2	3.8	"Meet a diversity of individuals"
Part of the job	1	1.9	"The work I do involves working with families, schools, and external organisations."
Total	53	100	

Feeling responsible for career success or failure (self-directed attitude).

In the self-directed attitude section, a follow up question was: "You have indicated that you are responsible for success or failure in your career. Why is that?" Having good skills associated with self-direction was important for almost a third of respondents, and having appropriate knowledge, goals, a willingness to learn, and the ability to work hard were also mentioned as contributing towards feelings of responsibility (see Table 8).

Table 8
Question 23: Student and psychologist responses

Theme	N	%	Example
Responsibility	18	38.3	"Because I am responsible for my own professional development and career path"
Self-direction	14	29.7	"It's based on the choices and decisions I make"
Ability to work hard	5	10.6	"I will be successful if I work hard, foster positive relationships, continue to upskill"
Having appropriate knowledge	3	6.4	"No one knows me better than I do"
Adaptability	3	6.4	"Need to seize opportunities and plan for future steps"
Having goals	2	4.3	"I have goals and plans to achieve them"
Unsure	2	4.3	"Working for a govt department you are not always necessarily able to achieve the desired outcomes given funding and time restraints that are not conducive to 'success'"
Total	47	100	

Feelings about career success (values-driven attitude).

In the section on values driven attitudes, the follow up question was "You have indicated that what is most important to you is how you feel about your career success, not how others feel. Why is that?" Responses included accepting the fact that everyone measures success differently, being guided by values and self-knowledge, and putting ones' own happiness, confidence, and satisfaction first (see Table 9). Respondents also mentioned that they felt successful in their work because they are helping others.

Career Plans

This question asked respondents to give information about their two, five, and 10-year career plans. The majority of students were focused on finishing study and gaining registration as a psychologist, then gaining work experience (see Table 10). Respondents often described staying in their current position as a short-term plan and then either studying, changing employer, working overseas, moving into private practice, changing to a leadership role or working part time. Many answers included a mixture of all possible combinations.

Summary of Results

The quantitative data revealed that participants in the study exhibited boundaryless and protean career attitudes, as well as career adaptability. Students and psychologists had similar scores on all measures, except for the "support" section of the adaptability measure, which indicated that psychologists

Table 9
Question 35: Student and psychologist responses

Theme	N	%	Example
My own values	10	28.6	"I want a career that I enjoy, that challenges me to be a better person and that makes a positive difference in this world"
Everyone is different	6	17.1	"Because everyone is different and what others might perceive as not enough of a career success might be just perfect for me"
My own happiness	6	17.1	"My career is an important part of my own happiness. I can't let that depend on what other people feel about it"
My own satisfaction	4	11.4	"Because I primarily value my own judgement, and the degree of satisfaction I get from my job"
I am responsible for myself	3	8.6	"I'm responsible for myself, not for the viewpoints others may have"
Knowing myself	2	5.7	"Core competencies show that we must know ourselves"
People don't understand my work anyway	1	2.9	"Many people do not understand my training so don't understand my career progression"
My own confidence	1	2.9	"If I am confident about what I am doing and believe in it, then I am happy"
Age/experience	1	2.9	"I'm too old to be concerned about what others think of my career success!"
Unsure	1	2.9	"It's difficult to answer this question because I'm only just starting out again after re-training as an ed psych after previously being a teacher."
Total	35	100	

Table 10
Respondents' career plans

Theme	N	%
Retire or no plan	15	27.27
Example: *"Five year plan intend on retiring when 60 yrs of age"*		
Finish study>gain registration>work (private practice/employee/policy)	14	25.45
or study something else		
Example *"I am hoping to complete my degree in Educational Psychology then work as an Educational Psychologist for the Ministry of Education in the short term. I plan to build up my knowledge and experience, and look to do a PhD in the Medium term. In the long term, I aim to work privately, hopefully operating my own consultancy business specialising in gifted and talented children."*		
Continue working>work part time/	10	18.18
different work/study		
Example *"Short term – Stay where I am and gain experience. Medium term – pregnancy, maternity leave and finding a job that will allow me to work part time (I would be happy to stay at the Ministry of Education). Long term – Not set, though I don't see myself staying with the Ministry for another 10 years"*		
Continue working>private practice or study	10	18.18
Example *"short: stay with Moe to consolidate learning. 5 yr: be part of a private practice or private sector. 10 yr: own a practice, PhD possibly"*		
Continue working>management or leadership	4	7.27
Example *"...2-5 year career plan is to continue in a management role, but move into more clinical mgmt., eg., managing a team of psychologists"*		
Continue working>go overseas or into	3	5.45
private practice		
Example *"Short-term plan: to continue in current job, perhaps take on some private work on the side...long-term plan: potentially spend some time practicing overseas, maybe return to NZ to do some private practice..."*		
Total	55	100

felt less supported than did students. Psychologists working at the Ministry had a lower mean score for boundaryless attitudes than psychologists working outside the Ministry, as well as a lower score for "career agency" on the adaptability measure. The qualitative data for participants reflected the quantitative results and gave further insight into their career plans, why they enjoyed working with others, why they felt responsible for their own career success, and why they did not focus on how others perceived their career.

Discussion

Data from the survey demonstrates that boundaryless attitudes and a preference for mobility were evident among both educational psychology students and educational psychologists. Gaining new perspectives and learning from others were mentioned in almost 60 per cent of open-ended responses for why respondents enjoy working with people from outside their organisation. Late-career psychologists appear to identify slightly more with the boundaryless mindset than early-career psychologists, where the difference was approaching significance.

In terms of career plans, respondents appear to enact many of the aspects of the boundaryless career. They described switching to work for different providers of psychological services, intending to work part time in private practice as well as for an organisation, collaborating with colleagues to start new businesses, prioritising part-time work for family reasons, and accepting that there will be structural changes in the services they provide.

As discussed by Walton and Mallon (2004), some organisations are moving away from using large hierarchies relying on career planning and succession, and attention is shifting to the meanings that individuals find in their career. Interestingly, many of the psychologist respondents in this study are employed by the Ministry of Education, which does have a ladder system in place for career progression; however, these respondents were just as likely as others to mention engaging in future activities which were not associated with their current employer (such as switching to private practice).

The data in this study provides strong support for protean attitudes toward career. A protean attitude involves driving one's own career, having individually created goals encompassing all areas of life, and being motivated by psychological success rather than external markers of accomplishment. This attitude was evident, and was measured using scales related to self-directed and values-driven attitudes. There were no statistically significant differences between responses of students and psychologists, psychologists from different workplaces, and early and late-career psychologists. Feelings of self-direction and responsibility were mentioned

as reasons why respondents felt responsible for success or failure in their career. Respondents felt that accepting that everyone is different and understanding their own values influences why they are not concerned about how others feel about their career.

The Interaction of Protean and Boundaryless Attitudes

Responses to the protean and boundaryless items were analysed to determine the extent to which they fit within Briscoe and Hall's (2006) eight career profiles. Although only about half of the respondents fitted the eight profiles (31/55) there was a spike in the pattern of responses. Of the 31 participants who could be placed into the eight profiles, 11 fitted the 'wanderer' profile, making it the most common category. This profile represents people who are very boundaryless physically, but not so psychologically, as they are lower on the protean dimensions. Briscoe and Hall (2006) suggest that the 'wanderer' is open to whatever opportunities arise for them, and they do not see geographical or organisational boundaries as barriers. The limitation for people of this profile is that their psychological appreciation across boundaries is not as sophisticated as their ability to be physically mobile. The high number of respondents fitting into this category may relate to the fact that the sample included students and a high proportion of early career psychologists. This group may still be exploring their physical boundaries, as they work towards becoming more self-directed.

Five participants fell into the 'lost/trapped' category and five into the 'protean career architect' category. People who fitted the 'lost/trapped' profile were low on all four protean and boundaryless career dimensions. Briscoe and Hall (2006) suggest that people fitting this profile are trapped or lost because they lack emphasis on inner values which could direct their behaviour, and boundaryless perspectives which could uncover new possibilities. People in this situation may benefit from basic career development processes such as value clarification and career exploration activities. At the other extreme, the 'protean career architect' is thought to be psychologically and physically boundaryless, actively directing their own career management and being driven by personal values.

Four respondents fitted the profile of the 'organisation man/woman', which refers to people who are able to successfully take charge of career management, but who are not clear about their own values (Briscoe & Hall, 2006). These people work well across psychological boundaries but are less willing to work across physical boundaries, meaning that they may match their needs to those of the organisation.

Three respondents fitted the 'hired-gun/hired-hand' profile, representing people who may work across physical and psychological boundaries, but are not values-driven. Briscoe and Hall (2006) used this label to describe people who are mobile and adaptive in career management, but not skilled in defining their own values; "Their gun or hand is for hire, but not their heart" (p. 14). Two respondents fit the 'idealist' profile. This label describes people who are psychologically boundaryless and values-driven, but who are not as effective in physical boundary-crossing or career self-management. One person fitted the 'solid citizen' profile, describing people who are self-directed, values-driven, and psychologically boundaryless, but not physically boundaryless.

Career Adaptability

Qualitative data demonstrates that the majority of students are focused on finishing study and gaining registration as a psychologist, then gaining work experience. Eleven per cent of respondents plan on continuing in their current position in the long term. Thirty-two per cent planned on staying in their current position and then either studying, changing employer, working overseas, moving into private practice, changing to a leadership role or working part time. Twenty-five per cent of students and 23 per cent of psychologists comment that they would like to go into private practice at some point in the future.

The results showed that all factors associated with adaptability were rated in a positive way (Career Agency, Career Outlook, Occupational Awareness, Support, and Work-Life Balance), with Career Agency gaining the highest mean score.

What are the strengths/limitations of the research?

One strength of the present study is that it was an anonymous online survey and in this respect was able to ask questions about career attitudes with complete anonymity. The use of open-ended questions also gave participants an opportunity to clarify their responses and explain their thinking.

However, there are limitations to the study. One limitation is sample size; it is difficult to generalise the results to all educational psychology students. Only twenty-two students responded, with the majority attending University A; University B students may have different attitudes which were not represented in this study. Practicing psychologists were invited to participate through the Educational Psychology Forum, which includes educational psychologists in its membership, through email invitation to graduates from University A, and through two email invitations sent to psychologists in Auckland. This may have led to a larger number of psychologist respondents from Auckland, however this is not clear because location information was not collected. Psychologists in different parts of the country may have varying career attitudes depending on their particular job situation and location.

Another limitation is the design of the study, which is mainly exploratory. The survey used two previously developed measures, and added qualitative follow-up questions to some items. Validity and reliability of the current survey items were not calculated, however the protean and boundaryless items were validated by Briscoe et al. (2006), and the adaptability measure was validated by Rottinghaus et al. (2012).

Conclusion

Granrose and Baccili (2006) have highlighted a new conception of career that has emerged in which the employer provides an opportunity to develop career competencies but the individual does not expect any long-term commitment from the employer in terms of job security. The literature often describes an extreme version of this new landscape,

where long-term contracts are rare and career movement is constant, but the results of this study were that many respondents held boundaryless and protean attitudes, even when job security existed. The results of the study indicate that independent career management was important to this sample of educational psychology students and career psychologists, as they determine what success means to them and how they can achieve it.

Survey responses indicate that educational psychology students and professionals both held boundaryless and protean attitudes. Answers to the qualitative questions expanded on these results, identifying the many ways respondents planned on enacting their boundaryless attitudes. Switching between employers, working in private practice as well as for an organisation, starting new businesses, prioritising personal lives, and accepting change were mentioned as some of the possible future career paths that respondents may take. These behaviours were influenced by their protean career perceptions, in which respondents prioritised how they felt about their career and their responsibility for career success. Respondents appeared to understand the organisational opportunities available to them, while still navigating their careers independently. These students and professionals also agreed with the need for career adaptability so as to engage in planning and decision making behaviours which allow them to respond to change.

Implications

There is a vast amount of research into career attitudes and adaptability, however there is little research that looks specifically at these new career concepts of boundaryless and protean careers in the field of educational psychology. One practical implication of the study is that it provided us with a window into current career attitudes in the field of educational psychology, not just among practicing psychologists but among students about to transition into the field. These insights will be helpful not only for psychologists themselves to consider, but also for policy makers and managers as to how best to forward the careers of their staff.

Concluding statement

The results of this study suggest that in terms of career thinking, many psychologists in today's working environment do not see themselves as forever in one career but are oriented toward learning and exploration, while also understanding the importance of being able to adapt to change. While they may eventually find themselves on diverse career paths, holding on to these new career concepts, so different to traditional career ideas, will support them to succeed in the constantly evolving world of work.

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A survey of psychologists administering cognitive and neuropsychological assessments with New Zealand children

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Psychometric measures form an essential component of cognitive and neuropsychological assessments, yet there is a lack of published research about the practices of psychologists administering these tests in New Zealand. An online survey was developed to determine the views and practices of psychologists who administer cognitive and neuropsychological assessments with New Zealand children. Results of the 66 respondents revealed that the WISC-IV and the ABAS-II-Parent were the most frequently used measures and that lack of access and familiarity were most frequently cited reasons for not using a measure. Most respondents had concerns regarding the cultural sensitivity of tests and thought that New Zealand normative data was needed.

Keywords: neuropsychological assessment; cognitive assessment; test selection; child; New Zealand context

Cognitive and neuropsychological assessments with children must be accurate and valid due to the significant influence that results can have on the life of a child and their family/whanau. Patterns of psychometric test use and how appropriate a test is for the children being assessed, are critical considerations to ensure assessments are accurate and valid.

The selection of a psychometric measures involves multiple considerations, such as whether to use a flexible approach by selecting subtests as needed (e.g., Delis Kaplan Executive Function Scale), a fixed test battery approach (e.g., Luria-Nebraska Battery) or an approach based on cognitive abilities (Koziol & Budding, 2011). Other considerations include psychometric properties (validity and reliability/ sensitivity and specificity), availability of parallel forms and time, cost and whether to use computerised or traditional administration (Lezak et al., 2012).

A New Zealand perspective on test use was gained by a survey of members of the New Zealand Council for Educational Research (psychologists, consultants and counsellors) (Dunn & Dugdale, 2002) who considered whether test selection should be based on relevance, validity and credibility and on assessor factors such as training, experience and competence, not on cost-effectiveness and employer policies. The most five commonly used measures, (endorsed as being used once a month or more) were the Beck Depression Inventory (BDI-II; 27%), Wechsler Adult Intelligence Scale (WAIS-III; 22%), Wechsler Intelligence Scale for Children (WISC-III; 16%), Ravens Standard Progressive Matrices (SPM; 15%) and the Myers-Briggs Type Indicator (MBTI; 14%) (Dunn & Dugdale, 2002). Further, recommendations in the second edition of the Professional Practise of Psychology in Aotearoa New Zealand were that test selection should be based on content, psychometric qualities and based on the level the instrument is aimed at (Eatwell & Wilson, 2007). Despite the psychometric emphasis in cognitive and neuropsychological assessments, there is a lack of literature on the patterns of test use in these specific assessments.

The overall assumption is that the measures selected will be appropriate to the individual being assessed. This is achieved by comparing the individual being assessed to a normative sample (Feigin & Barker-Collo, 2007) usually comprised of local people in the geographical area where the tests were developed (Lezak et al., 2012). Typically these areas are North America (Feigin & Barker-Collo, 2007) described more recently as "white US and Canadian populations" (Thames, Karimian, & Steiner, 2016, p. 140) which differs significantly in geographical and cultural context from where the measures were often used. As there can be substantial differences between normative groups and the population being assessed, it is important to be aware of cultural differences when completing neuropsychological assessments (Horton, 2008; Wong, 2006). Literature in the New Zealand context is consistent with this (Dudley, Faleafa, & Yong, 2016) with accurate New Zealand normative data for neuropsychological assessments deemed necessary to provide increased specificity and sensitivity of diagnosis (Dudley et al., 2016). While some normative data for New Zealand has been developed (see the Psychological and Neuropsychological Norms for New Zealand data base https://cdn.auckland.ac.nz/assets/psych/about/our-research/documents/psychological-and-neuropsychological-norms-for-new-zealand.pdf), the only published article providing normative data with New Zealand children appeared 14 years ago (Fernando, Chard, Butcher, & McKay, 2003). While the second edition of the Professional Practice of Psychology in Aotearoa New Zealand (Ogden, 2007), lists measures commonly used for neuropsychological assessment with children the list does not appear to be substantiated by empirical research.

Cross-cultural neuropsychology has identified cultural differences with psychometric tools used in the neuropsychological of cognitive assessment of school-aged children (Sobeh & Spijkers, 2013; Mulenga, Ahonen & Aro, 2001). In New Zealand, cultural bias has been investigated by Haitana, Pitama, & Rucklidge, 2010 who found that the

Peabody Picture Vocabulary Test-III (PRVT-111) was largely appropriate for use with Māori children in mainstream schools but not for children attending Māori-medium schools where results were more indicative of stage of English language development than their overall language ability. These authors suggested adaptations such as more culturally appropriate target words (e.g., changing Porcupine to Hedgehog) and recommended inclusion of te reo Māori.

Despite the literature identifying cultural differences, it is currently unclear if psychologists who regularly administer these cognitive and neuropsychological assessments are aware of cultural influences or if they make adaptations for use with New Zealand children. There is no empirical research investigating psychologists' opinions on cultural influences.

In summary, the practice of cognitive and neuropsychological assessments with children in New Zealand has received little research attention. The purpose of the current study was to gether information about the cognitive testing processes with New Zealand children through a survey of New Zealand psychologists. There were two aims 1) to determine the patterns of test use, specifically the frequency of test and subtest use, as well as the reasons for test selection and 2) to provide perspectives on the impact and influences of cultural in cognitive and neuropsychological assessments with children.

Method

Survey

In consultation with three psychologists who administer cognitive measures with children, an online survey was developed that would take approximately 20 minutes to complete. It consisted of three sections a) clinical practice (country of training, scope of practice, current work sector; years and frequency of experience), b) test selection and c) cultural considerations.

The test selection section, b, focused on the frequency of use and reasons explaining use for measures. For clarity, measures were classified as either comprehensive measures or domain specific measures. Comprehensive measures include the WISC-IV[11] , NEPSY-II, Child Memory Scale (CMS), Wechsler Preschool and Primary Scale of Intelligence (WPPSI-IV), Delis Kaplan Executive Function System (DKEFS) and Stanford-Binet Intelligence Scale (SB5) and respondents were also asked about subtest use for these measures. Domain specific measures included for example the Stroop task and Conners Continuous Performance Test (CPT-3), as well as informant scales such as Adaptive Behavioural Assessment System (ABAS-II). Frequency of test use when completeing a cognitive or neuropsychologeical assessment was determined on a 5-point Likert scale based on use when completeing a cognitive or neuropsychologeical assessment (always use, almost always use, sometimes use, almost never use and never use). Respondents were able to endorse reasons against using a test from a given list as well as provide additional reasons explaining test use in an open comment box. The survey also asked about use of computerised administration and scoring and measures of effort. Suggested measures had been compiled from resources such as; Professional Practice of Psychology in Aotearoa New Zealand (Eatwell & Wilson, 2016), ACC Neuropsychological Assessment Services (ACC, 2009) and recent literature on neuropsychological assessment (e.g., Lezak et al., 2012).

The third part of the survey, contained open-ended questions on cultural appropriateness and need for New Zealand normative data, as well asking what cultural adaptations respondents made to administration.

Procedure

Invitation to participate in the survey was distributed via a link in the June 2016 New Zealand Psychological Society (NZPsS) Connections magazine and through an email sent to the members of the New Zealand College of Clinical Psychologists (NZCCP), the New Zealand Special Interest Group in Neuropsychology (NZSIGN) and the Massey University Psychology Clinics. Participants were also recruited through word of mouth within the psychological community. The survey was accessible online from June to August 2016. Due to this manner of recruitment there is no way to accurately determine the representation of the sample.

Data Analysis

The survey was analysed using SPSS 24. Although 97 psychologists started the survey only 66 (68%) responses could be analysed due to varying degrees of incompleteness. Quantitative results were analysed using descriptive statistics while the brief open-ended qualitative comments were analysed in terms of frequencies of most common survey responses similar to previous literature (e.g., Barker-Collo, 2015; Brooks et al., 2016).

Results

Sample

As shown in Table 1 almost all respondents were trained in New Zealand, with most working as clinical, education and general psychologists, in the education sector, district health boards or in private practice. Most (72.6%) had qualified within the previous nine years, and 63.6% conducted assessments 1-3 weekly.

Table 1
Demographic information of participants

		n	Percentage of respondents
Country of Training		65	
New Zealand		58	89.2
UK		3	4.6
USA		2	3
Australia		1	1.5
Other		1	1.5
Scope of Practice		66	
Clinical		28	42.4
General		21	31.8
Educational		14	21.2
Clinical Intern		3	4.5
Current Work*		66	
Education Sector		27	40.9
DHB		21	31.8
Private		18	27.3
ACC Practitioner		11	16.7
University		5	7.6
Community/NGO		4	6.1
Other		3	4.5
Experience with child cognitive and neuropsychological assessment		66	
Years	Less than 1 year	16	24.2
	1 to 4	16	24.2
	5 to 9	16	24.2
	10 to 14	9	13.6
	15 to 19	5	7.6
	20+ years	4	6.1
Frequency	Weekly	27	40.9
	2-3 Week	15	22.7
	Monthly	8	12.1
	2-6 monthly	7	10.6
	6-12 month	6	6
	Once in 12 months	3	3

Note. * = Percentage values for current area of work do not total to 100% because many respondents endorsed more than one current area of work.

1 Due to the recent updated of the 5th WISC edition, if respondents had started using the WISC-V they were encouraged to respondent based on their use of WISC-IV.

Test use

Comprehensive measures

As shown in Table 2, the WISC-IV was by far the most frequently used of the six measures with a very small percentage using the SB5.

Table 2
Current use of comprehensive measures

Measure	Total *n*	*n*	Percentage
WISC-IV	66	62	93.9
NEPSY-II	66	20	30.3
WPPSI-IV	64	18	28.1
DKEFS	66	15	22.7
CMS	65	13	20.0
SB5	65	6	9.2

Note. Total *n* = number of respondents who answered the question.
n = number of respondents who endorsed using the measure

Reasons the comprehensive measures were not used are shown in Table 3 below. An 'other' option provided respondents the opportunity to give alternative reasons. Comments listed within the 'other' option, that were endorsed by more than 10%[2] (CMS, WPPSI and SB), are described by notes [a], [b] and [c].

Table 3
Reasons endorsed for not using the specific comprehensive measures

Reason	Percentage* (*n*)					
	WISC (*3*)	NEPSY (*44*)	CMS (*51*)	WPPSI (*44*)	SB (*58*)	DKEFS (*50*)
Lack of familiarity with test		34.8	50.0	16.7	48.5	47.0
Lack of access to test materials		25.8	37.9	19.7	53.0	42.4
Limited/No training on this test		19.7	18.2	4.5	21.2	25.8
Purpose of the assessment	3.0	15.2	15.2	16.7	6.1	7.6
Cost of test		4.5	1.5	1.5	4.5	4.5
Length of administration time	1.5	10.6		1.5	1.5	
Psychometric properties		4.5		1.5	3.0	
Culturally inappropriate				1.5	1.5	
Reputation					3.0	
Other	3.0	9.1	10.6[a]	34.8[b]	10.6[c]	3.0

Note. * = Percentage values do not total to 100% because respondents endorsed more than one reason.
[a] = Within this 10.6%, most (42.8%) stated they preferred the NEPSY-II and CVLT
[b] = Within this 34.8% most (82.6%) stated they do not work with this age group of children.
[c] = Within this 10.6% most (57%) stated they preferred the WISC

As shown on Table 3, lack of familiarity was the most endorsed reason for participants to not use the NEPSY-II, CMS and DKEFS. Lack of access to test materials was the most endorsed reason for not using the SB5 in current practice. Most did not use the WPPSI due to the age of client (82.6%) and there were preferences for other measures over the CMS and SB5.

Respondents who endorsed using the comprehensive measures were invited to comment on the reasons explaining use[3] . Use of the NEPSY-II depended on the referral question (28%) and use of the WPPSI depending on the interest/ compliance of the child (21%) with 14% stating that it was used in conjunction with observation and school performance. The DKEFS was said to be a good/excellent measure by 18% with 12% stating that it was good to use with adolescents. The SB5 was good to use with low functioning children (18%).

Subtest Use

Respondents indicated the frequency of subtest use (detailed in the appendix) and commented on the reasons for use as detailed below. For the WISC subtests four participants noted that Letter-Number Sequencing was confusing or frustrating and two that Comprehension was helpful in providing information on thinking in social situations and that they preferred starting an assessment with Picture Completion.

NEPSY-II comments included "*Narrative Memory has a story that is far too complex*" and "*Memory for Names is too culture specific*", "*I like the Auditory Attention Test for which there is no other equivalent test*" and use of subtests for specific peoples "*I have used the Affect Recognition and Theory of Mind subtests as a way to assess children with autistic spectrum traits*" and "*I have used Theory of Mind, Memory for Names and Faces for students with a diagnosis of autism*".

The only comment specific to subtest use for the CMS was "*I like the stories in the CMS better than the stores in the NEPSY-II*". No comments were made about the DKEFS or WPPSI-IV subtests and of the SB5 "*some parts are too culturally bound e.g., picture absurdities with the map of the Americas*" and "*block span can be distracting to children*".

Domain-specific measures

The frequency of use of domain-specific or rating scales is shown on Table 4. Again respondents made specific comments on the reasons for use of the measures, and as with the comprehensive measures lack of familiarity and lack of access were the main reasons for not using measures. Test use was also influenced by referral reason or specific assessment type (e.g., for a ADHD or ID assessment). Preference for another measure also explained test use, with the ABAS[4] measures preferred over the three Vineland measures and the DKEFS or NEPSY-11 preferred over the Stroop-Child version.

Other measures. Respondents were asked to list other measures that they used in their practice that were not on the list provided. Most frequently mentioned were the Strengths and Difficulties Questionnaire (*n* = 7), Resiliency scales (*n* = 5), Autism Diagnostic Observation Schedule (ADOS[5]) (*n* = 4) and Beck Youth Inventories (*n* = 2). Measures that were only mentioned once are provided in the footnote below[6].

Effort

Most respondents (72.6%) did not administer a measure to assess effort (n = 62).

2 This value is guided by principals of a content analysis

3 As previously mentioned, reasons are reported based on frequency being 10% or greater

4 Second and third edition included

5 Second and third edition included

6 In alphabetical order; Autism Diagnostic Interview (ADI-R), Age and Stage Questionnaire (ASQ), Achenbach System of Empirically Based Assessment (ASEBA), Battelle Developmental Inventory, Childhood Autism rating Scale (CARS), Comprehensive Executive Function Inventory (CEFI), Children's Depression Inventory (CDI), Cognitive Assessment System, Eyberg Child Behaviour Inventory, Gilliam Autism Scale, Integrated Visual and Auditory Continuous Performance (IVA), Multidimensional Anxiety Scale for Children (MASC), Kaufman-Brief Intelligence Test-2, Naglieri Nonverbal ability test, Parenting scales, Piers-Harris self-concept scale, Performance Validity Tests. Raven Matrices, Session rating scale, Spence anxiety scale, Social competency scale, Outcome Rating Scale, Test of problem solving, Test of word reading efficacy, Wechsler Abbreviated Scale of Intelligence (WASI-II), Wechsler Nonverbal Scale of Ability (WNV), Wide Range Assessment of memory and Learning (WRAML) and Word Memory Test (WMT).

Those who did most frequently used the Test of Memory Malingering (TOMM) (26.1%), followed by child observation or interview (21.7%), Word Memory test (17%), Rey 16 item test (13%) and embedded measures (8%).

Table 4
Most frequently used domain specific or rating scale measures

Measure		*n*	Percentage of responses				
			Always	*Almost always*	*Sometimes*	*Almost never*	*Never*
Informant Scales							
ABAS II	Parent	**63**	11.1	12.7	57.1	9.5	9.5
	Teacher	**61**	9.8	9.8	55.7	14.8	9.8
CCBRS	Parent	**62**	9.7	11.3	37.1	14.5	27.4
	Teacher	**61**	9.8	11.5	37.7	14.8	26.2
	Self	**60**	5	8.3	36.7	13.3	36.7
CBCL	Parent	**64**	9.4	25	39.1	10.9	15.6
BRIEF	Parent	**62**	4.8	9.7	17.7	6.5	61.3
	Teacher	**61**	4.9	6.6	16.4	6.6	65.6
BASC	Parent	**63**	1.6	12.7	23.8	14.3	47.6
	Teacher	**61**	1.6	13.1	23	11.5	50
	SDH	**62**	1.6	0	6.5	21	71
	Self	**62**	0	12.9	16.1	9.7	61.3
Vineland-II	Teacher	**63**	1.6	3.2	19	12.7	63.5
	Interview	**63**	1.6	3.2	15.9	11.1	68.3
	Parent	**61**	1.6	1.6	21.3	14.8	60.7
Other Domains Specific Measures							
CVLT-C		**60**	5	0	8.3	3.3	83.3
TEA-Ch		**62**	3.2	1.6	3.2	3.2	88.7
PPVT-4		**60**	3.3	5	28.3	13.3	50
WIAT-3		**63**	3.2	4.8	28.6	12.7	50.8
Conners CPS-3		**60**	3.3	3.3	16.7	11.7	65
WRAT-4		**61**	1.6	1.6	6.6	14.8	75.4
RBANS		**62**	0	1.6	6.5	8.1	83.9
C-AVLT-2		**61**	0	3.3	3.3	3.3	90.2
Stroop - Child		**62**	0	1.6	4.8	1.6	91.9
Bayley Scales		**63**	0	1.6	3.2	12.7	82.5
CELF-4		**60**	0	0	5	5	90
Bender Gestalt Test		**62**	0	0	1.6	3.2	95.2
AWMA		**62**	0	0	1.6	1.6	96.8

Note. ABAS- Parent = Adaptive Behavioural Assessment Scale - Parent, CBCL – Parent = Child Behaviour Checklist – Parent, ABAS II - Teacher = Adaptive Behavioural Assessment Scale – Teacher, CCBRS-Parent = Conner's Comprehensive Behaviour Rating Scales - Parent, CCBRS-Teacher = Conner's Comprehensive Behaviour Rating Scales - Teacher, BRIEF – Parent = Behaviour Rating Inventory for Executive Functioning - Parent, CCBRS - Self = Conner's Comprehensive Behaviour Rating Scales - Self, BRIEF – Teacher = Behaviour Rating Inventory for Executive Functioning - Teacher, CVLT-C
= California Verbal Learning Test – Children's Version, PPVT-4 = Peabody Picture Vocabulary Test – 4th, WIAT-3 = Wechsler Individual Achievement Test – 3rd Edition, Conners CPS-3 = Conners Continuous Performance Scale3, TEA-Ch = Test of Everyday Attention – Children, BASC - Parent
= Behaviour Assessment Scale for Children – Parent, BASC - Teacher = Behaviour Assessment Scale for Children – Teacher, Vineland-II – Teacher = Vineland Adaptive Behaviour Scale –II – Teacher, Vineland-II – Survey = Vineland Adaptive Behaviour Scale –Survey Interview Form, Vineland-II - Parent = Vineland Adaptive Behaviour Scale –Parent, WRAT-4 = Wide range achievement test-4, BASC-SDH = Behaviour Assessment Scale for Children – Structured Developmental History, BASC-S = Behaviour Assessment Scale for Children – Self, RBANS = Repeatable Battery for the Assessment of Neuropsychological Status, C-AVLT-2 = Children's Auditory Verbal Learning Test-2, Bayley Scales = Bayley Scales of Infant and Toddler Development, Stroop = Stroop Colour and Word Test: Children's Version,CELF-4 = Clinical Evaluation of Language Fundamentals -4th, AWMA = Automated Working Memory Assessment.

Computerised administration and scoring

Most respondents did not use computerised administration in their assessments (71.7%) and of those that did the majority used the Connor's CPT (*n* = 5; 9.4%). Comparatively, most respondents used computerised scoring (65%), most commonly for the WISC-IV & V (*n* = 36; 60 %), but also for NEPSY-11 (*n* = 7; 11.6%).

Cultural Considerations

Assessment measures

Respondents were asked to comment on the culturally sensitivity of measures, with 24% expressing some concern as shown in Table 5 (in order of increasing concern). Fourteen respondents mentioned specific tests; 10 indicated the benefit of New Zealand norms in WISC-V and WPPSI-IV and four people had concerns, 2 with the ABAS and 2 with the vocabulary, information or comprehension subtests from the WISC-IV.

Table 5
Respondents comments on cultural appropriateness *(n = 62)*

Themes	Representative Comments
Adequate (16%)	"*no problem*"
	"*generally okay*"
	"*passable*"
Could be better (4.5%)	*"they could be a lot more culturally appropriate"*
	"could be improved"
	"I don't think they fit perfectly to NZ culture"
Improving (9%)	*"getting better"*
	"WISC V has improved cultural relevance"
	"WISC V has relevant norms for NZ/Australia so appears appropriate"
Clinical judgement required to acknowledge culture (11%)	"*cultural background must always be considered*"
	"All of them have biases that need to be taken into consideration when clinically interpreted"
Not culturally appropriate (9%)	*"not very"*
	"not entirely culturally appropriate"
Concern for specific persons and peoples (24%)	*"no norms for Māori or Pasifika children which I do not think is appropriate"*
	"*not great with new immigrants or refugees*"
	"*need to question use with specific populations … including English as second language and Māori"*

Note: All of the themes identified are presented in this table (even ones occurring < 10%) in order to demonstrate the richness and range of opinions evident in the data from this question

Administration changes

Most respondents (69.7%) stated that they changed aspects of administration for use with New Zealand children examples of which are shown on Table 6. Other changes included units ("*pounds/miles*") and places ("New York and Chicago to Auckland to Wellington"). One participant commented they do so "*where it makes understanding clearer for client*" and another that they are "*mindful of my own accent*".

Table 6
Examples of words changed by respondents *(n = 62)* assessing NZ children

Original Word	Changed for NZ Children
Mom	Mum
Purse	Wallet
Squash	Pumpkin
President	Prime Minister
Fall	Autumn
Eraser	Rubber
Juan	Tama
Thongs	Jandals
Trash	Rubbish
Family	Whānau
Faucet	Tap
Store	Shop

Normative Data

Of the 62 respondents who offered an opinion regarding the need for normative data for New Zealand, 80.3% said 'yes', 9.1% were 'not sure' and 4.5% of respondents said 'no'. The most frequent reason for the need of normative data was due to the uniqueness of New Zealand (22%), with comments including, "*I think it is important to have norms for Maori children in particular given the effects of colonization*", "*…the cultural make-up of New Zealand is completely different than any overseas nation*", "*gathering normative data is incredibly important to ensure that we are aware of the differences and unique characteristics of our child population*" and "*there's no excuse really, we need to be able to norm to an New Zealand population so we can use these tests with more validity and reliability*".

Of the respondents who were unsure or stated no, 10 made comments, the majority identifying reasons against collecting norms including "*cost*", "*labour intensive and frankly a waste of time*" and "*likely to reflect Auckland and not the rest of New Zealand*". Additionally, two participants thought New Zealand norms would be ideal but not necessary "*not 100% necessary… but optimal would be to have New Zealand norms*". One respondent commented that collecting New Zealand norms would be an "*incessant luxury*".

Final opportunity for comments included the following insights "*Clinical judgement and experience need to be used with all information gathered from tests and rating scales*" and "*…culturally appropriate assessment needs to focus less on the specific instruments and more on the assessors using them*" and "I*n my experience there is an over reliance on formal tests and not enough information gathered from all the environments a child spends time in*". Two respondents provided more argument for the need for cultural appropriateness measures "*we need more culturally appropriate tests for our indigenous population*" and "*it would be great to have some more locally produced and affordable products that pertain specifically to a New Zealand population*".

Post Hoc Findings

Examination of the relationship between place of work and scope of practice (see Table 7) revealed that most respondents in the educational sector were equally divided between the education and general scopes of practice, while those in the clinical scope had a greater spread across work settings, working privately and in District Health Boards.

Chi-squared tests of independence were used to determine whether test use for the comprehensive measures was equal across scope of psychological practice, years of experience and frequency of assessments.

Table 7
Scope of practice and current work comparison

Scope	Current work (*n**)						
	Education	DHB	Private	ACC	University	Community/ NGO	Other
Clinical	0	15	14	9	4	2	2
Education	14	0	1	0	1	0	0
General	13	4	2	2	0	1	1
Intern	0	2	1	0	0	1	0

Note. * = *n* does not total the number of respondents in each scope as respondents were able to endorse multiple current work settings

Scope of practice

Statistically significant relationships were found between the use of the NEPSY-II (Statistically significant relationships were found between the use of the NEPSY-II ($\chi^2(3) = 13.297$, $p = .004$), DKEFS ($\chi^2(3) = 17.125$, $p = .001$), CMS (χ^2 (3) = 11.518, $p = .009$) and SB5 ($\chi^2(3) = 8.024$, $p = .046$) and scope of practice with participants in the clinical scope using these measures NEPSY-II, DKEFS, CSM and SB5 more (see Figure 1). No statistically significant association was found between scope of practice and use of the WISC-IV (χ^2 (3) = 4.106, p = .250) or the WPPSI-IV (χ^2 (3) = 1.820, $p = .611$).

Frequency of assessments

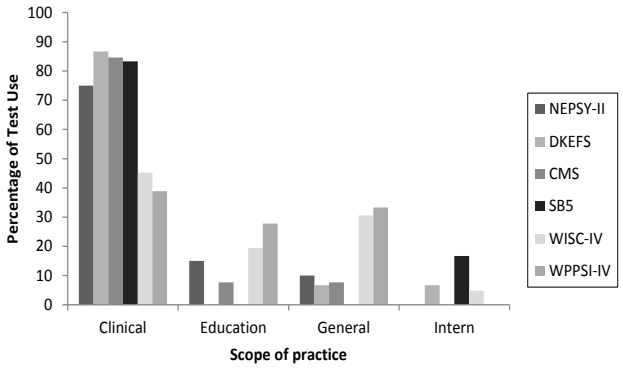

Figure 1. Scope of practice and use of NEPSY-II, DKEFS, CMS, SB5, WISC-IV, WPPSI-IV

A statistically significant relationship was found between the frequency of administering assessments and use of the NEPSY-II ($\chi^2(5) = 13.151$, $p = .022$) and CMS ($\chi^2(5) = 12.709$, $p = .026$), with the NEPSY-II and CMS used more by respondents who administer assessments more frequently than those who administer assessments less frequently. No statistically significant association was found between frequency of administering assessments and use of the WISC-IV ($\chi^2(5) = 5.370$, $p = .372$), DKEFS ($\chi^2(5) = 6.610$, p = .251), WPPSI ($\chi^2(5) = 8.315$, $p = .140$) or SB5 ($\chi^2(5) = 1.538$, p = .909).

Years of experience

A statistically significant relationship between years of experience and use of the CMS ($\chi^2(5) = 11.797$, p = .038), was found with respondents with more years experience using this measure more frequently. No statistically significant association between the years of experience and use of the WISC-IV ($\chi^2(5) = 8.037$, $p = .154$), NEPSY-II ($\chi^2(5) = 2.909$, p = .714), DKEFS ($\chi^2(5) = 6.141$, $p = .293$), WPPSI ($\chi^2(5) = 5.071$, p = .407) or SB5 ($\chi^2(5) = 8.458$, $p = .133$).

Discussion

This study sought to explore the current practices of psychologists conducting cognitive and neuropsychological assessment with children in New Zealand, in particular to determine the frequency of test and subtest use, provide perspectives on test selection and cultural considerations.

Consistent with previous research (Dunn & Dugdale, 2002) the WISC-IV was the most commonly used comprehensive measure to assess cognitive and neuropsychological function of New Zealand children. The most commonly used domain specific/rating scales, the ABAS, CBCL and CCBRS, reflect the emphasis on adaptive and difficult behaviour in the context of cognitive and neuropsychological assessments. The focus on adaptive behaviour is not surprising as it is required for a DSM diagnosis of Intellectual Disability.

The focus on behaviour scales in the context of cognitive and neuropsychological assessments reflects the importance placed on considering a child's behaviour. Additionally, the importance the respondents placed on gathering information from parents, and to lesser extent teachers, was also demonstrated. Consideration of a child's behaviour and obtaining perspectives from third parties in the context of neuropsychological assessments is consistent with the literature (New Zealand Psychologists Board 2013; Teeter et al., 2009).

Ideally, psychologists should be familiar with and have access to a range of measures to provide the best assessment for a child. This was explained by Darby & Walsh (2005) who said "*the experienced neuropsychologist will gradually develop quite a large armamentarium from which to choose*" a test measure (p 404). Yet the results of this survey indicate that test selection appears dominated by pragmatic considerations such as lack of familiarity and access. Opportunities for psychologists to familiarise themselves with a range of measures and increased access to psychometric materials would result in test selection being less dominated by pragmatic considerations and aim towards an ideal assessment. Shifting test selection from pragmatism to idealism would allow for the most appropriate test being used to assess a child.

In literature overseas, effort is seen as a necessary component in comprehensive neuropsychological assessment with children to ensure assessments are a reflection of true ability (Deright & Carone, 2015; Perna, 2016). It is crucial that cognitive and neuropsychological assessments are an accurate representation of ability in order to avoid incorrect interpretations or diagnoses. However, majority of our respondents did not use a measure of effort in their assessments with children. This finding might be due to only 16.7% of respondents working for ACC where assessment of effort is expected. Of those who did use a measure of effort, the most common measure (TOMM, 26.1%) was a stand-alone measure of effort, compared with embedded measures (8.7%). This is somewhat similar to research with adults in New Zealand (Barker-Collo & Fernando, 2015) where the TOMM was used slightly more frequently (39.7%) than embedded measures (38%). However it is inconsistent with previous research in North America (Brooks et al., 2016) where embedded measures were used more frequently in neuropsychological assessments with children than stand-alone measures.

Concerns raised regarding cultural sensitivity in the current study align with recent discussions on the need to recognise the diversity within New Zealand (Dudley et al., 2016). Respondents' concerns demonstrate an awareness and sensitivity to culture within their psychological practice e.g., changing '*family*' to '*whānau*' during assessment administration. This finding reinforces comments made by Haitana et al. (2010) suggesting that future research should investigate the use of te reo Māori in cognitive assessments with children in New Zealand.

The focus on the diversity of New Zealand was also reflected with the finding that the majority of the survey respondents considered it important to obtain normative data for New Zealand children (80.3%). These professional opinions are consistent with the literature (Dudley et al., 2016). Normative data for New Zealand has been collected for the WISC-V with a sample of 528 children from New Zealand and Australia. This recently updated measure can therefore be used in New Zealand with greater confidence than other measures. Since the WISC-IV is frequently used during a cognitive or neuropsychological assessment with New Zealand children, providing more accurate cognitive and neuropsychological assessments in New Zealand in the future is likely.

The post hoc findings showed that clinical psychologists were more likely to ustilise a range of psychometrics than other scopes of practice. This may be due to the varying core competencies for different scopes of practice as defined by the New Zealand Psychologists Board. A skill described as 'completion of cognitive intellectual assessments and neuropsychological screening' (pp. 21) is only detailed within the clinical scope of practice (New Zealand Psychologists Board, 2011).

It is recognised that the size and self-selecting nature of the sample may have resulted in sample biases and this is identified as a limitation of the current study. The findings have highlighted test and subtest preferences and provided insights into why particular measures are being selected. The majority of respondents had a sensitivity to and consideration for diversity and culture which was demonstrated through comments made about whether measures are culturally appropriate, concerns for specific peoples and persons, adaptations made for use in New Zealand and the need for normative data. Future research in the area of neuropsychological assessments in New Zealand should develop normative data for measures which are frequently used in order to ensure neuropsychological assessments are the most appropriate for every child in Aotearoa, New Zealand.

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APPENDIX

Frequency of WISC-IV, WPPSI-IV, NEPSY-II, DKEFS and CMS subtest use

Subtests	*n*	Percentage of responses				
		Always	*Almost always*	*Sometimes*	*Almost never*	*Never*
WISC-IV						
10 main subtests	**59**	79.7	15.3	3.4	0	1.7
Full 15 subtests	**51**	2	9.8	31.4	29.4	27.5
Digit Span	**59**	88.1	10.2	1.7	0	0
Coding	**60**	86.7	13.3	0	0	0
Block Design	**59**	86.4	13.6	0	0	0
Similarities	**59**	86.4	11.9	0	0	1.7
Matrix Reasoning	**58**	86.2	12.1	1.7	0	0
Symbol Search	**60**	85	15	0	0	0
Vocabulary	**59**	83.1	13.6	3.4	0	0
Letter-no. sequencing	**59**	57.6	15.3	20.3	6.8	0
Comprehension	**59**	55.9	23.7	11.9	8.5	0
Information	**59**	50.8	13.6	16.9	11.9	6.8
Picture Completion	**54**	25.9	11.1	31.5	20.4	11.1
Arithmetic	**58**	24.1	17.2	22.4	31	5.2
Cancellation	**54**	14.8	5.6	35.2	27.8	16.7
WPPSI-IV						
All	**13**	38.5	30.8	15.4	7.7	7.7
Matrix Reasoning	**15**	66.7	13.3	20	0	0
Block Design	**15**	60	26.7	13.3	0	0
Similarities	**15**	60	20	20	0	0
Information	**13**	53.8	30.8	15.4	0	0
Coding	**15**	53.3	20	20	0	6.7
Picture Concepts	**14**	50	7.1	35.7	0	7.1
Vocabulary	**15**	46.7	26.7	20	0	6.7
Picture Memory	**13**	46.2	15.4	30.8	0	7.7
Comprehension	**15**	40	20	33.3	0	6.7
Receptive Vocabulary	**13**	38.5	23.1	30.8	0	7.7
Zoo Location	**13**	38.5	15.4	23.1	15.4	7.7
Bug Search	**13**	38.5	23.1	23.1	7.7	7.7
Cancellation	**13**	38.5	15.4	15.4	23.1	7.7
Object Assembly	**14**	35.7	28.6	21.4	0	14.3
Picture Completion	**13**	30.8	15.4	30.8	7.7	15.4
Animal Coding	**13**	23.1	15.4	38.5	7.7	15.4
Picture Naming	**14**	21.4	28.6	21.4	14.3	14.3
Word Reasoning	**14**	21.4	7.1	50	7.1	14.3
NEPSY-II						
All	**16**	0	0	12.5	18.8	68.8
Inhibition	**18**	16.7	27.8	38.9	16.7	0

List Memory	**18**	16.7	33.3	38.3	11.1	0
Narrative Memory	**18**	11.1	33.3	44.4	11.1	0
Comprehension of Instructions	**18**	11.1	27.8	50	11.1	0
Animal Sorting	**18**	11.1	16.7	38.9	27.8	5.6
Theory of Mind	**18**	11.1	16.7	61.1	5.6	5.6
Affect recognition	18	11.1	5.6	66.7	5.6	11.1
Auditory Attention and Response set	**18**	5.6	27.8	33.3	22.2	11.1
Design Copying	**18**	5.6	16.7	61.1	5.6	11.1
Memory for Faces	**18**	5.6	11.1	55.6	22.2	5.6
Speeded naming	**18**	5.6	11.1	50	27.8	5.6
Word Generation	**18**	5.6	11.1	50	33.3	0
Geometric Puzzles	**17**	5.9	0	35.3	35.3	23.5
Memory for Designs	**18**	0	22.2	50	11.1	16.7
Clocks	**18**	0	11.1	33.3	33.3	22.2
Memory for Names	**18**	0	11.1	44.4	33.3	11.1
Arrows	**16**	0	18.8	43.8	31.3	6.3
Block construction	**18**	0	11.1	44.4	22.2	22.2
Repetition of Nonsense words	**17**	0	5.9	35.3	41.2	17.6
Sentence Repetition	**18**	0	0	66.7	22.2	11.1
Phonological Processing	**18**	0	0	61.1	16.7	22.2
Picture Puzzles	**18**	0	0	44.4	33.3	22.2
Route Finding	**17**	0	0	41.2	41.2	17.6
Oromotor Sequences	**18**	0	0	33.3	38.9	27.8
Statue	**17**	0	0	29.4	52.9	17.6
Fingertip Tapping	**18**	0	0	27.8	44.4	27.8
Imitating hand positions	**18**	0	0	22.2	55.6	22.2
Manual Motor Sequences	**18**	0	0	16.7	61.1	22.2
DKEFS						
All	**10**	20	10	10	10	50
Trail Making Test	**15**	40	20	40	0	0
Verbal Fluency	**15**	40	20	40	0	0
Colour-word interference	**15**	40	13.3	33.3	13.3	0
Design Fluency	**14**	14.3	14.3	35.7	21.4	14.3
Sorting	**15**	13.3	13.3	33.3	26.7	13.3
Twenty Questions	**15**	6.7	13.3	40	33.3	6.7
Tower	**15**	6.7	13.3	33.3	40	6.7
Proverb	**15**	0	6.7	20	46.7	26.7
Word Context	**14**	0	0	28.6	42.9	28.6
CMS						
All	**7**	0	14.3	57.1	0	28.6
Core CMS subtests	**10**	10	20	60	0	10
Stories Recall	**12**	41.7	16.7	41.7	0	0
Word pairs	**12**	16.7	16.7	50	16.7	0
Word Lists	**12**	16.7	16.7	50	16.7	0
Family Pictures	**12**	16.7	0	41.7	41.7	0
Dot locations	**11**	9.1	18.2	54.5	18.2	0
Picture Locations	**11**	9.1	0	54.5	36.4	0

Faces	**12**	8.3	16.7	66.7	8.3	0
Sequences	**12**	8.3	8.3	58.3	25	0
Numbers	**10**	0	10	50	30	10

Note. SB-V is not presented in this table, as so few (9.2%) respondents used it. Three respondents used all subtests *always*, 1 *almost always*, 1 *sometimes* and 1 *never*. Five subtests were identified as being used *always* by 2 respondents and *sometimes* by 1 respondent, Early reasoning, verbal analogies, procedural knowledge, form board, form patterns and memory for sentences.

Risk attitude, perceived returns and investment choice in New Zealand

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Why do New Zealanders invest overwhelmingly in housing and not in shares? This paper adopted a psychological approach to examine the question. Study 1 investigated whether the relatively high level of New Zealand ownership of housing might stem from risk aversion. A sample of New Zealanders was more likely to prefer housing investment than a Hong Kong sample, but there were no differences in Investment Risk Attitude although this variable was positively correlated with share investment in both samples. Study 2 looked at how New Zealanders perceived past rates of return on different investments and found a tendency to overestimate the returns from housing. They showed a similar pattern for their expectations of future returns. However, the estimates of returns were very variable and the estimates of returns from housing were not strongly related to investment choice.

Keywords: investment; housing; risk attitude; shares; perceived return

Risk attitude, perceived returns and investment choice in New Zealand

New Zealanders save, overwhelmingly, by investing in housing. New Zealand economists who have looked at this pattern have concluded that it is not in the interests of the country or, most likely, that of the individual saver. It is also well-known that New Zealanders are reluctant to invest in shares (e.g. Bollard, 2004; Bollard & Smith, 2006; Scobie, Gibson & Le, 2004). Why does this pattern of investment occur?

Investment analyses generally isolate two variables as crucial for determining a good choice of investment: the riskiness of the investment and the rate of return that can be expected from it (e.g. Campbell, 1996; Wärneryd, 2001). Thus, it seems reasonable to examine whether New Zealanders' preferences for housing investments might be explained either by their attitude to risk or by their perceptions (or misperceptions) of the returns from different investments. Our first study examined the possibility that New Zealanders might be risk averse in investment matters, and we examined and compared the investment preferences and investment risk attitudes of samples from New Zealand and Hong Kong. The second study investigated how people perceived the movement of different asset in New Zealand prices over the previous ten years.

Although the underlying purpose behind the two studies was the same – examining why New Zealanders invest in housing and avoid shares – they draw on different backgrounds. For this reason, the rationales for the two studies are explained separately, and the background for the second study is deferred until later in the paper.

Attitude to risk is an important psychological variable to consider in regard to investment. Risk attitudes are well-known to influence people's investment behaviour, and those who are prepared to invest in shares have generally been found to be more risk tolerant – or alternatively less risk averse – than the average person (Hunter & Kemp, 2004; Kristjanpoller & Olson, 2015; Luchtenberg & Seiler, 2014; Nosic & Weber, 2010; Wärneryd, 1996, 2001). Indeed, it is now common for people's investment risk attitude to be measured as part of the process of giving investment advice (e.g. Goldstein, Johnson, & Sharpe, 2008). An investment advisor will be reluctant to recommend to someone who is risk averse that they invest in shares, and much more likely to recommend some other form of investment. In Study 1 we used Wärneryd's (2001) Investment Risk Attitude Scale to measure people's attitude to investment risk.

Hong Kong seemed a good comparison with New Zealand simply because it is different. It is small and land is not for sale, and, although many people in Hong Kong own residential real estate, ownership is of apartments rather than houses. On the other hand, Hong Kong has a thriving share market and may have the highest ratio of share market capitalisation to GDP in the world, and certainly much higher than in New Zealand (e.g. The Global Economy, 2015). Thus we expected to find that a sample of people in Hong Kong invested or were more willing to invest in shares and less in residential real estate than people in New Zealand.

The key hypothesis, however, was that the differing patterns of investment might accompany differences in risk attitude. There are two aspects to this. Firstly, in line with previous research, we expected to find that, within both societies, risk tolerant people would be more likely to invest in shares, less likely to invest in term deposits and perhaps also less likely to invest in real estate. Secondly, if New Zealanders invest more in housing because they are risk averse, then we would expect to find that differences in actual investment between Hong Kong and New Zealand are reflected in difference in risk attitude. New Zealanders should be significantly less risk tolerant.

Study 1

Method

Questionnaire

The New Zealand version of the questionnaire was in English, the Hong Kong version in both English and traditional Chinese (as is commonly used in Hong Kong).

The English questionnaire began with the Investment Risk Attitude Scale (Wärneryd, 2001). This scale contains 6 items (e.g. "If I think an investment will be profitable, I am prepared to borrow money to make this investment"). Increasing scores on the scale indicate greater willingness to take investment risks. All items are answered on a 5-point scale anchored with "Strongly disagree" and "Strongly agree". Three items are reverse-coded. The scale has a potential range from 6 to 30.

Respondents were asked to imagine they had "inherited $10,000 from a distant relative and you would like to invest it", and were asked to allocate the money among the four investment categories: term deposit, unit trust, shares and real estate. The next question asked the same allocation decision for the amount of $100,000 (similarly inherited). Definitions of the investment types were given. (See Appendix 1.)

Four financial behaviour questions followed. Respondents were asked whether they or their partner currently owned a term deposit account, shares, a unit trust investment, or any residential real estate (including one they lived in). All were simply answered yes or no, except for the last where "yes, more than one property" and "yes, just one property" were options. The questionnaire concluded by asking the respondent's gender and age.

The Hong Kong questionnaire was similar to the English version but underneath the English wording (including the response labels) was a translation into Chinese. The translation was performed by one Chinese-speaking member of the research team, and then back-translated by another. There was one other important difference. The amounts of money were given in Hong Kong and not New Zealand dollars. At the time of the research the exchange rate was around NZ $1 = HK $6.20. To keep the amounts roughly comparable across the questionnaires and still make for a relatively straightforward task, the amounts for allocation in the Hong Kong questionnaire were chosen as HK $100,000 and HK $1,000,000.

Both questionnaires were available as both pen and paper and online (via Qualtrics), with the majority being answered online.

Procedure and respondents

For both samples, paid assistants distributed questionnaires (either pen and paper or online) to people they knew. No assistant recruited more than 20 respondents. The assistants were asked to recruit members of the general public with a special aim to recruit respondents who had investments of some kind.

The final samples contained 133 New Zealand (NZ; mostly Christchurch) and 130 Hong Kong (HK) residents. The NZ sample contained 45 males and had a median age in the range 35-44 years. Ninety respondents reported having partners, and 46 had dependent children. The HK sample had 66 males and median age in the range 35-44 years. Eighty-one were either married or had other stable relationships, and 51 had dependent children.

Results and Discussion

Table 1 shows comparative statistics for the different investment types. In order to make the data on the different allocation decisions comparable across samples and amounts, these data are given as percentages. (So, for example, the HK sample's average 37.1 % investment of the low sum in Term Depsits equates to an average investment of HK $37, 100.)

As can be seen in the table, a greater percentage of the money was allocated to term deposits when the sum to invest was smaller ($F(1, 260) = 57.0$, $p < .001$; partial $\eta^2 = .18$), and this tendency was particularly true for the NZ sample (Interaction, $F(1, 260) = 9.83$, $p < .01$; partial $\eta^2 = .04$). There was no significant main effect of sample ($F(1, 260) = 2.44$, *ns*). The percentage of money allocated to a unit trust (which was, on average, small) was unaffected by sample ($F(1, 260) = 1.29$, *ns*), sum ($F(1, 260) = .82$, *ns*) or the interaction ($F(1, 260) = .1$, *ns*). The HK sample allocated a greater percentage to shares ($F(1, 261) = 25.6$, $p < .001$; partial $\eta^2 = .09$), and shares received a higher proportion of larger sums ($F(1, 261) = 17.6$, $p < .001$; partial $\eta^2 = .06$). There was no interactive effect on share allocation ($F(1, 261) = 1.97$, *ns*). On average, the NZ sample allocated more money to real estate than the HK sample ($F(1, 260) = 7.63$, $p < .01$; partial $\eta^2 = .03$); a greater percentage was allocated to real estate if the sum was large ($F(1, 260) = 115.7$, $p < .001$; partial $\eta^2 = .31$) and there was a tendency for the NZ sample to invest more in real estate when the sum was large ($F(1, 260) = 4.97$, $p < .01$; partial $\eta^2 = .02$). Overall, the most striking result is that, as expected, the Hong Kong sample was prepared to invest a higher percentage of either windfall in shares.

Table 1.
Average percentages of low (HK $100,000 and NZ $10,000) and high (HK $1,000,000 and NZ $100,000) sums of money allocated to four different types of investment. (Standard deviations shown in parentheses.)

	Low sum		High sum	
	HK	NZ	HK	NZ
Term deposit	37.1 (36.8)	49.8 (41.9)	26.6 (25.9)	24.7 (29.1)
Unit Trust	12.5 (24.4)	10.6 (22.6)	11.8 (17.1)	9.1 (16.0)
Shares	28.5 (36.1)	12.9 (25.9)	19.3 (21.1)	8.2 (13.9)
Real estate	22.1 (31.2)	26.7 (38.8)	42.5 (35.4)	58.1 (37.6)

The percentages of the two sample actually holding examples of the different types of investment at the time of the survey are shown in Table 2. In line with our expectations, the HK sample was more likely to own term deposits and shares and less likely to own real estate.

Table 3 shows the correlations of the two scales with various other measures in the survey. Results with each sample are largely as predicted; moreover the two samples behaved quite similarly. Those who hypothetically allocated more money to shares and less money to term deposits were more likely to be risk tolerant. Those who actually owned shares

or unit trusts were also more risk tolerant in both samples, although ownership of a term deposit was not associated with risk attitude. On the other hand, real estate investment, whether actual or hypothetical, did not relate to risk attitude.

Table 2.
Percentage of the two samples in Study 1 owning each of the four types of investment.

	HK	NZ
Term Deposit	75	48***
Unit Trust	32	23
Shares	64	31***
Residential real estate	55	89***
- 1 property	38	64***
- More than one property	18	26

*** Test of significance between two proportions, $p < .001$.

Table 3.
Pearson product-moment correlations between the Investment Risk Attitude Scale and hypothetical and actual investment preferences for the Hong Kong and New Zealand samples.

	HK	NZ
Smaller sum allocation		
Term Deposit	-.40*	-.30*
Unit Trust	.24*	.01
Shares	.31*	.25*
Real Estate	.08	.05
Larger sum allocation		
Term Deposit	-.47*	-.42*
Unit Trust	.13	.14
Shares	.32*	.22*
Real Estate	.19*	.11
Owning:		
Term deposit	.01	-.12
Unit Trust	.22*	.19*
Shares	.18*	.24*
Real Estate	.03	-.11

* $p < .05$; two-tailed test.

The HK (M = 16.1, SD = 3.9) and the NZ (M = 15.1, SD = 4.9) samples scored similarly on the Investment Risk Attitude Scale ($t(261) = 1.80$, $p = .073$). Thus, the differences in both hypothetical and actual investment behaviour between the two samples, could not be attributed to differences in investment risk attitude.

Study 1 found that people in Hong Kong were more likely to own or willing to invest in shares than New Zealanders and less likely to invest in real estate. Also, in line with previous findings, risk tolerant people in both societies were more likely to invest in shares. However, the key hypothesis – that the difference in investment pattern between the two societies is related to a difference in risk tolerance – was not supported.

An obvious limitation of the study is that neither sample was likely to be truly representative of possible investors in Hong Kong or New Zealand, and the possibility of some kind of cross-cultural bias in the sampling cannot be excluded. However, the samples were similar in age and, more importantly, differed in their actual investment choices in the same way as the larger populations. Moreover, at the least it can be said that the different patterns of investment choice between the samples were not associated with differences in risk tolerance.

It is also worth noting that two further studies have found national differences in investment preference not to be reflected in differences in risk tolerance: Hsaio (2013) found no difference in risk tolerance between New Zealanders and Taiwanese; Kemp, Chan, Chen, Fetchenhauer, Helton & Steiniger (2017) similarly reported no difference between New Zealand and German samples. Both studies used the same measure of risk attitude as Study 1; and both found cross-national differences in actual investment patterns. Moreover, these studies too showed only weak relationships between risk attitudes and housing investment preferences. Thus, the tentative conclusion is that, although differences in risk attitudes are related to differences in individual investment preferences and behaviour, they are not the explanation for why New Zealanders concentrate their investments in housing.

Study 2

Our second study examined New Zealanders' perceptions of the rate of return available from different investments. Braithwaite and Kemp (2007) found that New Zealanders did perceive that housing offered higher rates of return, but their study used simple rating scales. In the present study we asked people to estimate the actual rates of return from investment in housing, shares and term deposits over the previous ten years. The simple idea here is that people's estimates of the returns that were available in the past are likely to be important in their expectations for the future.

There are at least two reasons for believing that people's perceptions of, or memory for, past returns might not be very accurate. Previous studies of people's memory for past consumer prices have found that these are not well remembered or estimated (e.g. Kemp, 1987; Ranyard, Del Missier, Bonini, Duxbury, & Summers, 2008). The misperception of past prices is not restricted to consumers: a study of New Zealanders involved in the wool industry (for example, sheep farmers) found that they misremembered past wool prices in much the same way (Kemp & Willetts, 1996). Thus, it seems reasonable to question whether past rates of return for different investments would be accurately estimated.

Secondly, determining actual historical rates of return for different classes of assets can be quite difficult. It is well known that rates of return from housing and shares are very variable from year to year, and one should look for long-term rates. However, very few historical series seem to be available in New Zealand, and those that are (e.g. NZX, 2017; REINZ, 2017) proved quite difficult to locate. Moreover, while the estimates of the rates of return are reasonably comparable for shares and term deposits (NZX, 2017, Reserve Bank of New Zealand, 2017), the housing price index (REINZ, 2017) simply records average house prices and omits consideration of rents obtainable, mortgages, and house renovation and maintenance. (See Appendix 2 for more detail about the different series.) The last is a particularly significant omission because it is known that people underestimate the real cost of house renovation and are likely to underestimate past maintenance costs (Peng, 2011).

Thus, we anticipated that people would not estimate past

returns from housing, shares, and term deposits accurately, and most likely would overestimate the returns from housing. Given the difficulty of accessing reasonable data, we also anticipated substantial individual variation in the estimates. We also expected that people's preferred investment choices would reflect their misperceptions of the different rates of return.

Method

Questionnaire

The questionnaire began by asking respondents to imagine they had "inherited $100,000 from a distant relative and you would like to invest it", and were asked to allocate the money among three investment categories: term deposit, unit trust, shares and real estate.

The next three pages asked respondents to estimate past or future returns for house prices, shares and term deposits. They were reminded that they were unlikely to have very accurate answers to the questions and to make the best guess they could.

The first of these pages asked respondents first to "consider an average house in New Zealand. Over the 10 year period from the end of 2006 until now, what do you think is the average yearly percentage increase in the value of the house in this period? (Note that the actual yearly increase will have been very different from year to year; we only ask you for the average.)" Similar questions asked for the average yearly percentage increases in the value of a mixed collection of NZ shares, and the average yearly interest paid on a term deposit over the same period.

On the next page respondents were first asked to consider that "$100,000 was put into a house in New Zealand, which was then rented out. The owner received rent, but had to pay out for interest payments on the mortgage, rates, insurance, and maintenance. Any surplus rent was taxed, reinvested in improving the property, or paying off the mortgage. Taking all these factors into account, what do you think the current total value of the investment would be today?" Other questions asked for the current total value of $100,000 share and term deposit investments.

The next page asked respondents to consider someone who invests $100,000, and to estimate the value in ten year's time from investing it today in a house, shares and a term deposit. As for the preceding set of questions they were reminded to take into account taxes and other expenses.

The final page of the questionnaire asked yes/no questions about their current ownership of the three investment classes and about their parents' house and share ownership.

Procedure and respondents

Paid assistants distributed pen and paper questionnaires to people they knew. No assistant recruited more than 17 respondents. The assistants were asked to recruit members of the general public with a proviso that the respondents be New Zealand residents, over 18, and not current students. In fact, the vast majority of the respondents lived in and around Christchurch. Questionnaires were completed between November 2016 and February 2017. (For later questionnaires, the dates supplied in the questions were slightly differently worded.)

The final sample of 115 people contained 48 men and 64 women (no information for 3). There were respondents in every 10-year age range from 15-24 (15) to 65 and over (10), with the median in the range 35-44. The majority of the respondents lived in Christchurch.

Forty-three percent of the respondents (2 missing) lived in a house they owned, sometimes with a partner; 24 % owned shares (2 missing); and 35 % had a term deposit (2 missing). Eighty-one percent had grown up in a house that their parents (or parent) had owned (3 missing or don't know); 41 % of them reported that their parents (or parent) had owned a house that was rented out to others; and 42 % reported that their parents had owned shares (41 % no; 16 % didn't know).

Results

Of the hypothetical windfall, respondents invested an average of $38072 (*SD* = $35878) in a term deposit, $14594 (*SD* = $20453) in shares, and $47334 in housing (*SD* = 35449; $F(2,226) = 22.1$, $p < .0001$; partial $\eta^2 = .16$). As the size of the standard deviations indicates, the respondents were quite variable with many choosing to invest the full amount in one or other of the three asset classes. The hypothetical investments resemble both the results of Study 1 and the actual investments of the respondents in favouring housing strongly over shares.

The mean and median estimates of the average percentage yearly returns are shown in Table 4. Also shown are estimates of the actual average returns over the period. (Details of how these estimates were arrived at are given in Appendix 1.) Note, however, that these estimates themselves are themselves variable. (For example, house price increases varied markedly from area to area in this period; different share portfolios will have had different rates of return; term deposit returns vary unsystematically with the length of the deposit period.) Although the actual returns for the three classes of investment were quite similar, the respondents "remembered" a considerably greater increase for housing. It is also noteworthy that there was great variation between respondents.

Table 4.
Respondents' mean and median (also upper and lower quartile [Q]) estimates of the average yearly return (%) over 2006-2016 for three types of $100,000 investment. Actual percentage returns are also shown.

	Mean (%)	Median (%)	Lower Q (%)	Upper Q (%)	Actual (%)
Housing	13.0	8.0	5	18	5.2
Shares	8.3	5.5	3.3	10	5.1
Term deposit	5.4	4.0	3	5	4.9

Table 5 shows the respondents' estimates of how much a $100,000 investment made in 2006 was worth at the end of 2016, and how much they estimated an investment of $100,000 made now would be worth in 2026. (No estimates of actual 2016 value were made as these would depend on

individual tax rates. Nor are there reliable data for house renovation and maintenance expenses.) As for the average yearly increase results, respondents generally believed that there had been a markedly higher increase in return from housing than the other asset classes, although again there was considerable variation between respondents. The future results show that respondents expect these differences to continue over the next 10 years, although they also generally expected a greater increase in value over the next ten years than the previous 10 years.

Table 5.
Respondents' estimates of value of three types of $100,000 investment after the past or next 10 years.

	Mean ($,000)	Median ($,000)	Lower Q ($,000)	Upper Q ($,000)
Over the past 10 years (end 2006-2016)				
Housing	184.3	150	120	200
Shares	151.5	140	120	180
Term deposit	131.1	130	110	150
Over the next 10 years (end 2016-2026)				
Housing	240.9	200	150	255
Shares	180.8	150	120	200
Term deposit	161.6	135	120	180

Notes. Friedman ANOVA showed a significant difference between the respondents' value estimates for the three investments for both the past (χ^2 [n = 109, df = 2] = 51.9, p < .0001) and future (χ^2 [n = 106, df = 2] = 71.1, p < .0001) periods. Sign tests showed significant higher estimates for the future than the past periods for all three investments (Housing, z = 5.34, p < .0001; Shares, z = 4.22, p < .0001; Term deposit, z = 3.69, p < .0002). Q = Quartile.

We ranked the perceptions of return for each individual for the three types of investment. For example, the respondent's answers might show housing (1) as giving the best return; then shares (2); then the term deposit (3). (Where the respondent perceived equal returns the number was split, e.g. first equal became 1.5.) We did this for both past and the future return questions. Table 6 shows – consistent with the other results – that most people thought housing returns had been and would continue to be better. The table also shows significant (p < .05) Pearson correlations between the ranks and the spending of the hypothetical windfall. Those who perceived shares as performing better allocated more of the hypothetical windfall to shares, but, interestingly, allocation of the windfall to housing is not so closely related to the perception of higher returns from housing. We also investigated (through a series of 15 t-tests) whether individuals who owned a type of investment or whose parents owned a type of investment were also more likely to rank the returns from that investment higher but no significant (uncorrected p < .05) effects were found.

In summary, although nominal actual returns on the three types of investment have been fairly similar over the previous ten years, the respondents generally perceived that returns from housing had been considerably higher. However, as the quartiles show, there was considerable individual variation, perhaps reflecting the lack of readily available data. Future returns for all investments were expected to be higher than those over the previous ten years, possibly reflecting the occurrence during the previous ten years of the Global Financial Crisis (e.g. Turner, 2015), possibly reflecting optimism bias (e.g. Baker & Nofsinger, 2002). Finally, although perception of higher returns from shares is associated with a greater preference for hypothetical share investment, there is only a weak relationship between perceiving higher returns from housing and preference for investing in housing.

General Discussion

As Study 1 shows, the New Zealand preference for housing investment does not appear to be the result of risk aversion. Although New Zealanders were more willing to invest in housing and less willing to invest in shares than people from Hong Kong there was no significant difference in risk tolerance between the samples. Although risk tolerance predicts a liking for shares, risk tolerance is only weakly related to housing investment preference.

The respondents of Study 2 perceived actual past rates of return for different investments variably and overestimated the rates of return available from housing. However, this result cannot be taken as simply indicating that New Zealanders invest preferentially in housing because they misperceive the returns from housing as greater than they are. The respondents in Study 2 were often aware that they did not know the actual answers – indeed, given the dearth of publicly available data it is hard to see how they could have known. It is also noteworthy (see Table 6) that for only one of the housing rate or value questions was there a correlation with windfall spending on housing and that people who owned houses did not perceive greater returns than those who did not. These results suggest that people do not make heavy use of their perceptions (or misperceptions) of the returns from housing in investment choices.

Table 6.
Percentage of the sample of Study 2 perceiving each of housing, shares and term deposits as the best (or equal best) returning asset for the three question types. Also shown are significant (p < .05) Pearson correlations of the rankings with the amount allocated from the hypothetical windfall.

Hypothetical windfall: Perceiving best return (% of sample)	Housing (r)	Shares (r)	Term deposit (r)
Average yearly return questions			
Housing 66			
Shares 28		-.28	.22
Term deposit 14			
Value in 2016 of a $100,000 investment made in 2006			
Housing 63	-.24		
Shares 26		-.27	
Term deposit 17			-.25
Value in 2026 of a $100,000 investment made in 2016			
Housing 73			
Shares 20		-.31	
Term deposit 14			-.25

Individual investment perceptions are likely to differ in large part because individual experiences differ. An obvious source of difference with respect to housing, for example, is that in recent years the rise in housing prices has been considerably greater in the Auckland region than in the rest of New Zealand, and the Study 2 sample was recruited in Christchurch. But even within a given city there have been considerable differences in the rate of increase between

different suburbs. This is not just an issue with housing: There can be great differences in the performance of different share portfolios. Moreover, fast rates of past increase in a particular housing area or type of share are not at all guaranteed to continue into the future.

Although looking at risk and return perception seems a logical place to begin the search for why New Zealanders invest so much in housing, the question must be seen as remaining largely unanswered. Previous research (Kemp et al. 2017) also shows that there is little relationship between investment choice and overall economic trust, although there is some evidence of a weak relationship between one's own investments and those of family and friends. The present Study 2 indicates that the preference is not based on an accurate perception of differing rates of return. However, many other possibilities remain. For example, housing investment may be preferred because it is supported (and to some extent underwritten) by the government. There also remain many other unexplored psychological factors.

Finally, we comment on an unexpected feature of our results. To date most research into investment choice has concentrated on share investment and there are some reasonably well-established results from this research – for example, the relationship between share investment and risk tolerance replicated in our Study 1. By contrast the factors underlying investment in housing have been less studied (see, for example, Braithwaite & Kemp, 2007; El-Attar & Poschke, 2011), although, worldwide, most present-day investment is actually in real estate (e.g. Turner, 2015). What the pattern of results in both the present Studies 1 and 2 suggests, however, is that the factors underlying investment in housing are not simply the reverse of those underlying investment in shares. Instead they appear to be quite different.

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Appendix 1. Descriptions of investment types used in Study 1.

Term deposit. You can invest your money in a term deposit that offers an annual rate of return on your money through interest calculated on every dollar in your account. For you to receive financial returns from this option, you have to leave your money in the bank and not 'touch' it for the agreed length of time. In order for this option to deliver your financial returns, the bank will lend your money to people at a higher rate and give part of the profit to you.

Unit trust. You can invest your money in a unit trust with an investment company which offers an annual rate of return on your money depending on the performance of the investment. Investing in a unit trust entails buying shares or securities in a fixed portfolio decided by the investment company.

Shares. You can invest your money in the stock market. The shares you buy will sometimes pay out a portion of the company's profits as dividends. You invest in shares that you expect to increase in value. You may buy and sell shares to make a profit.

Real Estate. You can invest your money in residential real estate. You invest on your own or with members of your family, and the decision to purchase the house is yours. If you take out a mortgage you must make repayments until the house has been paid for. You are responsible for financing maintenance, repairs and renovations.

Appendix 2. Actual returns on housing, shares, and term deposits for the period 2006-2016.

The Real Estate Institute of New Zealand produces a housing price index that dates back before 2006 (REINZ, 2017). This index was at 3000 (accurate to within 100) at the end of 2006 and 5000 at the end of 2016, giving a cumulative increase of 66.7 % and a compounded yearly average of 5.24%. The index is based simply on the average sale prices of houses. The index rose more rapidly in the later years. Over this period there has been an unusually marked regional variation in house prices (Kendall, 2016).

The New Zealand Stock Exchange (NZX, 2017) maintains an historical series of the gross index of the 50 leading shares in the market. This assumes that all dividends are taken and reinvested. The index stood at 4188.89 on December 31 2006 and 6881.22 on December 31 2016 giving a cumulative return of 64.7 % and a compounded annual return of 5.09 %. The increase was noticeably sharper from 2013.

The Reserve Bank of New Zealand (2017) has an historical series of retail rates on term deposit rates. We took the interest rates available from December 2006 to December 2016, which gave a cumulative return of 60.8%, and a compounded yearly average of 4.87% (assuming reinvestment of interest and capital). The index is only available for 6-monthly term deposit rates and other terms would give lower or higher rates. Interest rates were higher in the period 2006-2008 than later.

Note that the housing index is not strictly comparable to the other two. Using different time periods or assumptions (e.g. different periods for term deposits) would produce different results. However, very few historical series of New Zealand assets are available.

Personal values and support (or not) for the Trans Pacific Partnership Agreement

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This paper examined whether personal values and empathy and systemising traits relate to support levels for the Trans-Pacific Partnership Agreement (TPPA) in New Zealand. Two hundred and seventy respondents from New Zealand completed a 61-item questionnaire which measured self-rated knowledge and support for the TPPA, Schwartz Values, and Empathy and Systemising Quotients. Little to no self-rated knowledge of the TPPA strongly predicted neutrality in support levels for the TPPA. People who rated power and achievement highly tended to support the TPPA; those rating benevolence and universalism highly tended to oppose it. Higher levels of systemising were related to higher levels of self-rated TPPA knowledge, but empathy was only weakly associated with opposition to the TPPA. Overall, our results show that people's values are important in indicating support or opposition to trade deals, and perhaps need to be taken into account by those proposing or opposing the deals.

Keywords: Schwartz Values; empathy; international trade; TPPA; CPTPP.

In this study, the personal values of Schwartz's value inventory and personality traits of empathy and systemising were measured and then used to predict people's self-reported knowledge and support (or otherwise) for the Trans-Pacific Partnership Agreement (TPPA).

Trade and the TPPA

Free trade in its simplest form is the buying and selling of goods and services between countries without the governments applying tariffs, quotas, subsidies, or prohibitions which may disadvantage either country from conducting business in the other (Saggi & Yildiz, 2011). Multilateral trade agreements aim to free trade amongst three or more nations and are complex and take time to negotiate. The TPPA is one such multilateral free trade agreement and, at the time of the research, involved 12 countries, including New Zealand.

Ever since Adam Smith (1776) presented his division of labour theory and David Ricardo (1821) detailed the comparative advantage of trading between countries, modern economists have thought free trade is good (e.g. Whaples, 2009). However, the enthusiasm of economic experts is often not shared by the general public (e.g. Evans & Kelley, 2002; Mayda & Rodrik, 2001; Scheve and Slaughter, 2001), and a number of suggestions have been put forward as to why the views of economic experts and the general public might differ (e.g. Baron & Kemp, 2004; Kemp 2007; Sapienza & Zingales, 2013). Given this background, it is perhaps unsurprising that the TPPA deal reached on 5 October 2015 was received with little enthusiasm in New Zealand (and many other countries). For example, in New Zealand, a 3 News Reid Research poll from November 2015 reported that 54% opposed the TPPA, while 34% supported it and 12% were undecided (Sabin, 2015). An earlier poll by Colmar Brunton in September 2015 had more undecided respondents, with 32% saying they 'Don't Know', 24% saying 'Should Sign' and 44% saying 'Shouldn't Sign'.

Different views of the TPPA were widely reported in the media. Generally, supporters emphasised the economic (and to some extent social) benefits that would result from the reduction of foreign tariffs and quotas. Opposition focussed initially on the secrecy in which the negotiations were carried out (Sapienza & Zingales, 2013). After the text became public, issues such as increased cost of medical drugs, extensions to copyright, the empowerment of corporations, and restrictions on the sovereignty of the New Zealand government were often raised (e.g. McQuillan, 2016). A very brief survey carried out by two of the present authors at the end of 2015 indicated that secrecy, possible unemployment, medical drug costs, and sovereignty were the most important issues for those opposing. This survey also indicated that self-confessed knowledge of the TPPA was often low.

Trade and personal values

Thus, there were a number of good reasons why people might support or oppose the TPPA. However, given the relative lack of public knowledge of the issue, the sheer complexity and length of the agreement (Ministry of Foreign Affairs and Trade, 2016), and the politicised nature of the debate, it is likely that people's support or opposition was often based on a fairly simple evaluation of whether the TPPA appeared to be compatible with their values. For example, one later protester's placard read: "We care about other people" (Truebridge, 2016). Given that the values and traits of individuals affect decision-making processes in a number of ways, and given the variety of people's responses to the TPPA, it seemed worthwhile to consider whether there might be a relationship between people's values and their support or opposition to the agreement. Could it be then that people opposed the TPPA because they felt it contradicted their values?

For examining values, the Schwartz (1992, 1994b) value inventory was used in the present study. This inventory follows Schwartz's (1992, 1994a) theory of basic values in positing ten distinct values which are universally recognised across all cultures. These ten values form something of a continuum, with certain values being compatible and closely related (e.g., achievement and power); while other values are opposed to one another (e.g., conformity and self-direction).

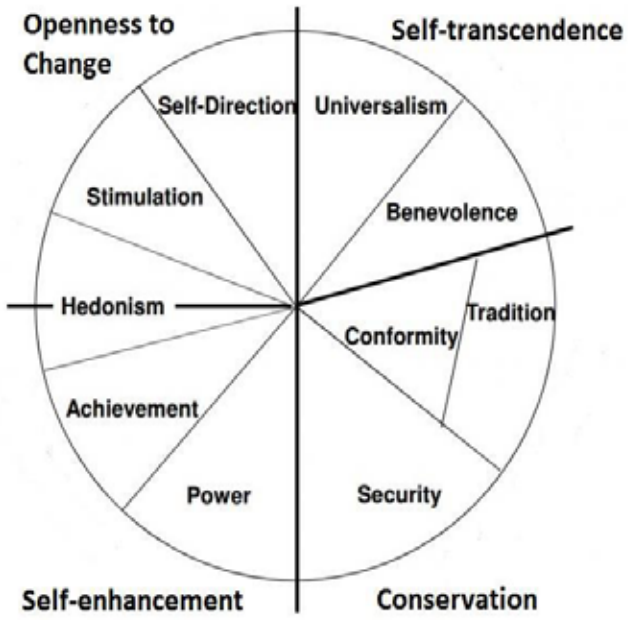

Figure 1. A representation of the 10 Schwartz values. Adapted from Schwartz (2012).

A common way of depicting Schwartz values is shown in Figure 1. The closeness of the values within the circle coincides with the motivations which underlie those values. The closer together any two values are within the circle, the more compatible their underlying motivations are (Schwarz, 1994b; Datler, Jagodzinski, & Schmidt, 2013). Schwartz's value inventory has been shown to be structurally similar across a wide array of culturally diverse groups and nations (Fontaine, Poortinga, Delbeke, & Schwartz, 2008; Schwartz, 2005). This research suggests that there is a universal organization of underlying human motivations. But while the structure and nature of values may be universal, the relative importance that individuals attribute to different values can vary considerably (Schwartz, 2005; Fontaine et al., 2008; Anyzova, 2014).

While no known studies to date have examined the relationship between the values of individuals and their support or opposition to trade or trade agreements, personal values have been found to relate to people's economic and political opinions. For example, Rathbun, Kertzer, Reifler, Goren, and Scotto (2016) found that individuals who rated the values of self-transcendence higher (universalism, benevolence) were also more likely to favour international cooperation which promotes the welfare of others. They argued that people take foreign policy personally, and the values which form the basis of an individual's beliefs and behaviour in daily life are the same values used to shape foreign policy preferences.

One study of fair trade consumption connected individual values with people's behaviour in day to day life. Doran (2009) found that intermittent buyers of fair trade products tended to rate benevolence higher than that of regular fair trade buyers; whereas regular fair trade buyers were more likely to rate universalism higher. In the present study, which looks at New Zealanders and their support or opposition for the TPPA, it seemed possible that those who place more importance on conformity, tradition, and security would be more likely to support the TPPA, as these values emphasise group survival under a common purpose (Rathbun et al., 2016), while those who rate universalism and benevolence higher might be more inclined to oppose the TPPA, for example, because they may see the TPPA as a means to exploit cheaper labour (cf. Kemp, 2008).

Empathy and systemising

These considerations also suggested it might be worthwhile to look at individual differences in empathy. The Empathy Quotient (EQ) and Systemising Quotient (SQ) measure two different psychological dimensions of an individual's persona (Baron-Cohen, 2009). Empathising in this framework is the motivation and ability to identify the mental state of others and to respond within a spectrum of appropriate emotions, whereas systemising can be thought of as the ability to analyse and understand the various processes which make a system work, so its behaviour can then be predicted and controlled (Auyeung, Allison, Wheelwright, & Baron-Cohen, 2012). These two individual difference measures are to some extent thought to be opposed (Baron-Cohen, 2004; Russell-Smith, Bayliss, Maybery, & Tomkinson, 2013).

The EQ and SQ scales have their origins in autism research and measuring differences between males and females (Baron-Cohen, Richler, Bisarya, Gurunathan, & Wheelwright, 2003; Baron-Cohen, 2004, Russell-Smith, et al., 2013; Samson, 2012), but they have also been used more generally. For example, Danno and Taniguchi (2015) found that drivers with higher EQ scores experience fewer traffic accidents and may be better at identifying hazards. While to our knowledge the scales have not been previously used to trade attitudes, empathy is linked to altruism (Feldman Hall, Dalgleish, Evans & Mobbs, 2015), and there is a relationship between altruism and views of trade between countries (Baron & Kemp, 2004; Kemp, 2007, 2008). It is possible then that a direct relationship may exist between empathy and people's perceptions of the TPPA. Someone with an empathy bias might view the TPPA negatively, while an individual with a systemising bias might view the TPPA positively because the emphasis is not on the social aspects but on the abstract processes of how business and trade operate.

Hypotheses

Psychological studies of international trade are relatively rare and this paper aimed to address at least one of the gaps in the current literature. A number of specific hypotheses were offered:

H1: Respondents' support for the TPPA would be related to their self-rated knowledge of the TPPA, with those who had limited or no knowledge of the TPPA more likely to be neutral in their TPPA support.

H2: Respondents who placed more importance on the self-transcendence values such as universalism and benevolence would tend to oppose the TPPA.

H3: Respondents with high empathy would oppose the TPPA. Systemisers were thought more likely to support it.

Method

Respondents and procedure

A total of 270 respondents completed the questionnaire, either by using online Qualtrics software or by filling out an equivalent hardcopy version on paper. Respondents had to be over 18 and living in New Zealand at the time of completing the questionnaire. Forty-eight student respondents were recruited from the Psychology 105 participation pool and were given a 1 % credit towards their final grade for completing the survey. The other respondents were recruited from the general public using a variety of methods, including advertisements posted on various Facebook Group pages. It is likely that some Facebook groups were biased either towards (e.g. Network NZ Business Community) or against (e.g. It's Our Future. Kiwis concerned about the TPPA) the TPPA.

Of the total respondents, 53 % were female. There were 222 respondents from the general population (51 % female), and 48 student respondents (63 % female). Respondents were classed into one of six age brackets with 73 (64 % female) aged between 18 to 24, 42 (60 % female) aged between 25 to 34, 55 (42 % female) aged between 35 to 44, 40 (63 % female) aged between 45 to 54, 33 (42 % female) aged between 55 to 64, and 27 (33 % female) aged 65 or over.

The responses were collected between May and August of 2016. Thus, at the time of the survey the details of the finalised agreement were publicly available in New Zealand.

Questionnaire

The research was approved by the University of Canterbury Human Ethics Committee. A single questionnaire was used. Information about the respondents' gender and age group was collected. They were asked to rate their own knowledge and support of the TPPA on 11-point scales, ranging from 0 (no knowledge at all; extremely strongly against) through 5 (average; neutral) to 10 (extremely knowledgeable; extremely strongly for).

The personal values of respondents were measured using the 10-item Short Schwartz Value Survey (SSVS). The SSVS was designed to measure the 10 different values (Power, Achievement, Hedonism, Stimulation, Self-Direction, Universalism, Benevolence, Tradition, Conformity, and Security) described by Schwartz's value theory (Lindeman & Verkasalo, 2005; Schwartz, 1992). Respondents assessed each value by rating a single item. Each item had a brief clarification of the value in question with synonyms in parenthesis next to the value [e.g., Power (social power, authority, wealth), Self-Direction (creativity, freedom, curiosity, independence, choosing one's own goals)]. Respondents then rated the importance of each value as a "life guiding principle" in their lives on a non-symmetrical 9-point scale ranging from 0 (opposed to my principles), 1 (not important), through 4 (important), to 8 (of supreme importance.

The next part of the questionnaire consisted of 47 items designed to measure the participants' empathy and systemising. All 47 items were answered on a four-point scale (Strongly agree, Slightly agree, Slightly disagree, Strongly disagree), and were randomised differently on each electronic questionnaire, while two versions of the hardcopy questionnaire were produced with different item orders. The scales used in this study were the 22-item Empathy Quotient (EQ-Short) and a 25-item Systemising Quotient (SQ-Short) (Baron-Cohen et al. 2003; Wakabayashi, Baron-Cohen, Wheelwright, Goldenfeld et al., 2006). Just under half of the items required reverse coding. Sample items for the EQ-short were "I am good at predicting how someone will feel" and "I can't always see why someone should have felt offended by a remark" (reverse scored). Items in the SQ-short included "I find it difficult to read and understand maps" (reverse scored) and "When I look at a building, I am curious about the precise way it was constructed". Wakabayashi et al.'s (2006) principal component and factor analyses indicated that the 22-item EQ-Short and 25-item SQ-Short strongly correlated with longer versions, and they reported Cronbach alphas of .90 for the EQ-Short and .89 for the SQ-Short.. Cronbach alphas from the present study were .88 (EQ) and .86 (SQ).

Results

This section presents firstly the results regarding knowledge and support for the TPPA as well as overall responses to the SSVS and the EQ and SQ. Relationships between the TPPA measures and the SSVS, EQ and SQ measures were examined using Pearson correlations. Finally, two multiple regression analyses predicted support for and knowledge of the TPPA from the demographic variables (gender and age) and significant predictors from the earlier correlational analyses.

Table 1. Percentage of the sample for each knowledge and support rating for the TPPA.

Rating	Knowledge	Support
0 (no knowledge/extremely against)	7.4	21.5
1	10.0	11.1
2	13.3	12.6
3	12.2	4.8
4	6.3	8.1
5 (average knowledge/neutral)	17.0	23.0
6	8.5	6.3
7	14.1	1.5
8	7.8	6.7
9	1.9	3.0
10 (extremely knowledgeable/extremely for)	1.5	1.5

The mean self-reported knowledge of the TPPA was 4.3 (*SD* = 2.6), while the mean support was 3.4 (*SD* = 2.8). Frequency distributions of the responses to the two variables are shown in Table 1. Note that very few respondents claimed much knowledge of the TPPA. For the support variable it is noteworthy that there were more against than for the agreement, but there were also a large number of neutral respondents. One might expect that neutral respondents would be more likely to claim little knowledge of the TPPA and Figure 2 shows that this was true for the sample. On average, women (*M* = 3.9) claimed less knowledge than men (*M* = 4.7; *t*(268) = 2.26, *p* = .025), and on average they were less supportive of the TPPA (Female *M* = 3.0; Male *M* = 4.0; *t*(268) = 2.83, *p* = .005).

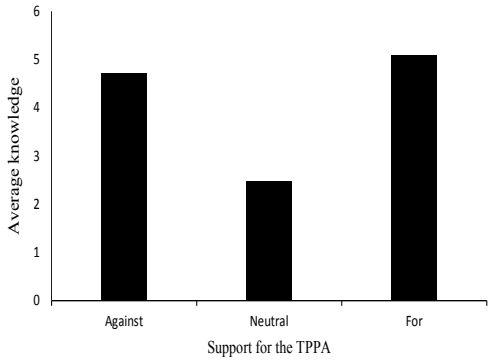

Figure 2. Average knowledge rating of those against (Support < 5), neutral towards (Support = 5), and for the TPPA (Support > 5). Analysis of variance shows significant differences among the knowledge ratings ($F(2, 267) = 22.7$, $p < .001$).

Table 2 shows the average importance ratings given to each of the 10 values for the SSVS, and the Pearson correlations of each value with the TPPA knowledge and support ratings. To control for rating bias in the Short Schwartz Value Survey, the correlations were obtained after standardising the value scores for each individual. In this procedure, the average of all 10 values was calculated for each respondent, giving a mean rating score for each individual, and this was then subtracted from their rating for each of the 10 values.

Table 2. Average Short Schwartz Value Scale importance ratings (with Standard Deviations) and Pearson correlations between the value ratings and the TPPA support and knowledge ratings.

Value	Average	Support (*r*)	Knowledge (*r*)
Power	3.3 (2.1)	.33*	-.01
Achievement	5.0 (2.0)	.27*	-.01
Hedonism	4.1 (2.1)	.10	-.07
Stimulation	5.1 (1.9)	.03	.10
Self-direction	6.4 (1.5)	-.23*	.25*
Universalism	6.2 (1.9)	-.44*	.21*
Benevolence	6.8 (1.5)	-.40*	.10
Tradition	5.0 (2.1)	-.04	-.17*
Conformity	4.8 (2.1)	.15*	-.23*
Security	5.3 (2.0)	.16*	-.12

Note. * $p < .05$, two-tailed.

As the table shows, there were moderately strong relationships between some of the respondents' SSVS importance ratings and their support or otherwise for the TPPA. Seven of the ten values correlated significantly with TPPA support. In particular, people who did not support the TPPA were likely to rate universalism ($r = -.44$) and benevolence ($r = -.40$) as very important; people who did support it were more likely to rate power ($r = .33$) and achievement ($r = .27$) highly. There were also significant correlations between the knowledge ratings and the value ratings, although these were less pronounced.

Table 3 shows the mean EQ and SQ scores (scored similarly to Baron-Cohen et al, 2003). The scores across gender were consistent with previous studies (Baron-Cohen et al., 2003; Baron-Cohen, 2004, Russell-Smith et al., 2013): Males generally scored higher on the systemising quotient ($M = 25.5$) and females higher on the empathy quotient ($M = 26.3$). The table also shows that more empathetic people (as measured by their EQ score) were a little less inclined to support the TPPA ($r = -.15$), while systemisers were quite strongly inclined to claim knowledge of it ($r = .40$).

Table 3. Average Empathising Quotient (EQ) and Systemising Quotients (SQ) (with Standard Deviations) and Pearson correlations between these quotients and the TPPA support and knowledge ratings.

Quotient	Average	Support (*r*)	Knowledge (*r*)
EQ	24.1 (8.7)	-.15*	.05
SQ	22.5 (9.3)	-.11	.40*

Note. * $p < .05$, two-tailed

We also conducted two multiple regressions, one to predict knowledge of the TPPA and one to predict support for the TPPA. A single simultaneous multiple regression was calculated for both variables. The regression for knowledge of the TPPA used age, gender, SQ score, self-direction, universalism, tradition and conformity as independent variables, following the criterion that only psychological variables with significant bivariate correlations would be entered. The independent variables accounted for 23.0 % of the variance in knowledge ($F(7, 262) = 11.2$, $p < .001$), and significant ($p < .05$) beta-weights were obtained for the variables of SQ score ($\beta = .32$), age ($\beta = .16$), and conformity ($\beta = -.15$).

Independent variables were chosen for the regression predicting support for the TPPA using the same criteria except that claimed knowledge of the TPPA was also included. Thus, the following predictor variables were included: age, gender, knowledge, power, achievement, self-direction, universalism, benevolence, conformity, security, EQ, and knowledge. Together these accounted for 28.5 % of the variance in support ($F(11, 258) = 9.4$, $p < .001$). Significant beta-weights (in decreasing order) were obtained for universalism ($\beta = -.21$), achievement ($\beta = .18$), benevolence ($\beta = -.15$), conformity ($\beta = .14$), power ($\beta = .14$), and gender ($\beta = -.13$). Note that knowledge had no independent effect, as might be predicted from Figure 2: Those who claimed to know more were less neutral, but might be either for or against the TPPA.

Discussion

Summary of findings

Overall our respondents were more opposed to the TPPA than for it. Hence our sample of respondents reasonably

reflected slightly earlier polls conducted in New Zealand that consistently found a majority opposing the TPPA (Sabin, 2015; Colmar Brunton, 2015). In line with our first hypothesis, respondents with minimal knowledge of the TPPA also tended to declare neutrality on the support scale, being neither for nor against the TPPA. It is thus possible that with further time there would have been a change of views, because presumably some people who knew little at the time of the study would have learnt more and then abandoned neutrality in one direction or the other. Incidentally, it is worth noting that overseas polls on the TPPA also found higher opposition than on other trade issues (e.g. Bloomberg 2016).

The average importance rankings for the ten values on the Schwartz's value inventory were consistent with previous research (see Fontaine et al., 2008; Schwartz, 2012). On average, our respondents ranked benevolence, self-direction, and universalism as their most important values, while power was ranked as the least important. Respondents' empathy and systemising measures were similar to those from previous studies (see Baron-Cohen et al., 2003).

Values related to both TPPA variables. Knowledge increased with increasing importance of self-direction and universalism and decreased with increasing tradition and conformity. Support for the TPPA increased with higher rated power, achievement, security and conformity, and, consistent with the second hypothesis, decreased for those assigning greater importance to universalism, benevolence, and self-direction. People who scored higher on the empathy quotient were less supportive of the TPPA, although the relationship was not strong, but, contrary to hypothesis three, systemisers were not more likely to support it. On the other hand, how much a respondent claimed to know about the TPPA was strongly related to his or her systemizing quotient in both the correlation and regression analyses. Overall, the correlational results indicate that values were quite strongly related to whether one supported TPPA or not; the empathy and systemizing quotients were not.

The regression analyses reinforce this conclusion. The predictor variables in combination explained 28.5 % of the variance in the TPPA support variable, and five values were significant independent predictors (as shown by the β-weights). Thus, it appears that people's attitudes to the TPPA really were partly predictable from their values.

The regression analysis also shows that claimed knowledge of the TPPA and support (or not) for it were predicted by quite different sets of variables. This result extends even to the demographic variables: Middle-aged and older people claimed more knowledge of the TPPA but age did not predict support; women were more likely to oppose the TPPA but gender did not predict claimed knowledge. Note, too, that self-reported knowledge did not influence support. The implication of these results is that the more people claimed to know about the TPPA, the stronger their opinion became, either in favour of, or in opposition to, the TPPA.

Limitations and further research

The present study was limited in a number of ways. While self-report measures of knowledge have been commonly shown to highly correlate with objective measures (Cockshell & Mathias, 2014; Taubman, Eherenfreund, & Prato, 2016), some testing questions to gauge respondents' knowledge of the TPPA might have added validity to the knowledge measures, albeit at the cost of increased length to the questionnaire.

The trait measures (EQ and SQ) employed here did not turn out to be important predictors of TPPA support, but it is possible that personality measures such as the Big Five (e.g. McCrae & Costa, 1987) might be. While it is difficult to see why extraversion would matter, openness to experience or agreeableness, for example, might well relate to trade attitudes.

Other inclusions for future research on specific agreements might include a measure of attitude to free trade generally (e.g. Baron & Kemp, 2004; Mayda & Rodrik, 2005). This is particularly true because much of the opposition to the TPPA arose not out of hostility to free trade generally but from opposition to particular features of the agreement. Many felt the agreement gave undue weight to corporations, provided for over-long rights to intellectual property, and was likely to increase medical costs (Labonte, Schram, & Ruckert, 2016). The extension of copyright that was part of the TPPA (Ministry of Foreign Affairs and Trade, 2016), for example, could more easily be viewed as a restriction of trade rather than an extension of it. Unfortunately, at the time the research was planned it was not clear that such features would be part of the TPPA.

The dynamic environment of world politics presents a challenge for research looking at any specific free trade agreement. At the time of the present study, it looked highly likely that the TPPA would be ratified by the 12 signatory countries. However, President Trump's election resulted in the withdrawal of the USA from the agreement. In February 2018 it looked as though the remaining 11 countries, including New Zealand, would all ratify a somewhat revised TPPA called the Comprehensive and Progressive Agreement for Trans Pacific Partnership (CPTPP). It would not be safe to conclude that the attitudes of New Zealanders to the TPPA at the time of the study we carried out would hold concerning the CPTPP in early 2018. It could be, for example, that more people might support it because the new agreement is at least a little different to the original one. However, other people, whose views about the TPPA might have derived from their overall political stance (e.g. oppose TPPA if you are on the political left) might now support it because US President Trump did not, or because two of the parties in the new government (Labour and New Zealand First) have now joined National in supporting the CPTPP. Such considerations indicate both that it might have been useful to include measures of political affiliation, and that longitudinal research on trade attitudes would be valuable. Incidentally, it is worth noting here that the effect of gender found in this study might be explicable in terms of general political orientation: Women in New Zealand have often been found to be more left-wing politically (e.g. Greaves, Robertson, Cowie, Osborne, Houkamu, & Sibley, 2017).

Implications

One way to think about the implications of our results is to consider how a movement either supporting or opposing the TPPA or CPTTP might use them to further its aim. It is clear

that simply distributing information is likely to have little value. There was little relationship between self-claimed knowledge and stance on the TPPA, perhaps because for most people the full nature and scope of the agreement was too complex to be understood anyway. Those opposing it could claim the moral high ground in stressing that opposition was consistent with universalism and benevolence. Those supporting it might rally others to their cause by questioning whether opposing the deal really is consistent with these values.

Whether the particular relationships between attitudes to the TPPA and attaching high importance to a particular set of values would be closely replicated for other trade agreements is debatable. Our view is that they probably would not. On the other hand, although different values might come to the fore for different free trade agreements, we expect that the most fundamental conclusion indicated by the present research would probably generalise. This is simply that the values people hold are important for what they think about trade, and that these values do need to be taken into account in negotiating trade deals or, indeed, a range of other international agreements.

Conclusions

Attitudes to the TPPA were found to be little influenced by how empathetic or systemizing people were, but were quite strongly related to the types of values they hold dear. People who supported the TPPA attached importance to the values of power, achievement, and (to a lesser extent) conformity and security. Those opposing it thought universalism, benevolence, and (to a lesser extent) self-direction important. An obvious recommendation is that the values people hold, and not just their narrow self-interest, could be taken into greater account in advocating trade deals.

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The New Zealand Psychological Society

Te Rōpū Mātai Hinengaro o Aotearoa

Expressions of Interest

Editor – New Zealand Journal of Psychology

After eight years as Editor of the New Zealand Journal of Psychology Dr John Fitzgerald will be stepping down to take on other responsibilities within the New Zealand Psychological Society. We are seeking a new Editor-in-Chief who will be able to take over the role mid-2018. Dr Fitzgerald will be available to provide technical training and support so that a gradual and smooth transition can occur.

The position requires the Editor to work closely with authors, reviewers and the National Office to produce three issues of the Journal each year. The transition to solely digital publication and the use of the Scholastica journal production portal has greatly streamlined the submission and reviewing process, and further development are anticipated regarding digital production and promotion. For these reasons the Editor needs to be comfortable working in a digital environment. While the Editor, along with a small editorial board, set the general strategic direction of the Journal, much of the editorial role involves the application of general reviewing processes and detailed work associated with individual submissions. While this may sound taxing the role is immensely rewarding, and is an important role in helping to shape the local psychology landscape.

If you are interested in taking on this challenge, please express interest by writing to Society's National Executive care of our Executive Director (Dr Pam Hyde, executivedirector@psychology.org.nz). You should provide a statement about what interests you in the role, what skills and experience you have which make you a 'good fit', and make some comment about how you see the Journal developing in the future. If you would like to discuss the position before applying please feel free to contact Dr Fitzgerald directly (j.m.fitzgerald1@massey.ac.nz) Expressions of Interest must be received at the National Office by 30th April 2018.