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Precursor, indicator or mirage: What relationship exists between spirituality and type of giftedness?

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**UNIVERSITY OF
WOLLONGONG**



**Precursor, indicator or mirage: What relationship exists between
spirituality and type of giftedness?**

A thesis submitted in fulfilment of the
requirements for the award of the degree

DOCTOR OF PHILOSOPHY

from

UNIVERSITY OF WOLLONGONG

by

Russell Walton, B.Ed. (Hons)

School of Education, Faculty of Social Sciences

March, 2015

Thesis certification

I, Russell Walton, declare that this thesis, submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Education, Faculty of Social Sciences, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Russell Walton

25 March 2015

Table of contents

| | |
|---|-----|
| Thesis certification..... | ii |
| Table of contents..... | iii |
| List of tables | v |
| List of figures..... | vi |
| Abstract..... | vii |
| Acknowledgements..... | ix |
| Chapter 1: Introduction..... | 1 |
| 1.1 Framing the research..... | 1 |
| 1.2 Framing the researcher..... | 3 |
| 1.3 Positioning a synthesis of research and researcher | 5 |
| Chapter 2: Literature review | 7 |
| 2.1 Framework | 7 |
| 2.2 Intelligence..... | 8 |
| 2.2.1 Sternberg’s triarchic theory | 9 |
| 2.2.2 Gardner’s Multiple Intelligences (MI) theory | 11 |
| 2.2.3 Spiritual intelligence | 17 |
| 2.3 Giftedness | 19 |
| 2.3.1 Definitions of giftedness and talent | 19 |
| 2.3.2 Gagné’s DMGT | 22 |
| 2.4 MI/DMGT crossover | 25 |
| 2.4.1 Linking spiritual intelligence to giftedness..... | 29 |
| 2.5 A place for the spiritual | 30 |
| 2.5.1 Spirituality as intelligence | 31 |
| 2.5.2 Spirituality as existence | 36 |
| 2.6 The influence of contemporary spiritual models on the current research..... | 43 |
| 2.7 Giftedness and spirituality | 49 |
| 2.7.1 Relating education and intelligence to religion and spirituality | 52 |
| 2.8 The current study | 54 |
| Chapter 3: Excising religion | 56 |
| 3.1 Introduction..... | 56 |
| 3.2 Examining bias | 57 |
| 3.2.1 Example 1: Bellous and Csinos (2009) | 58 |
| 3.2.2 Example 2: Hyde (2008b)..... | 59 |
| 3.2.3 Example 3: Radford (2004) | 60 |
| 3.2.4 Exemplars summary | 62 |
| 3.3 Separate paths? | 63 |
| 3.3.1 Religion..... | 63 |
| 3.3.2 Spirituality | 65 |
| 3.4 Meeting of the ways..... | 66 |
| 3.5 A causal relationship for confusion | 68 |
| Chapter 4: Method | 71 |
| 4.1 Research aim..... | 71 |
| 4.2 Design | 72 |

| | |
|--|-----|
| 4.3 Site | 73 |
| 4.4 Participants | 75 |
| 4.5 Instrument | 75 |
| 4.6 Procedure | 78 |
| 4.7 Data analysis | 79 |
| 4.8 Conclusion | 79 |
| Chapter 5: Results | 80 |
| 5.1 Introduction..... | 80 |
| 5.2 Analyses..... | 80 |
| 5.3 Overall spirituality scores | 81 |
| 5.4 Interaction between Group and Sex in spirituality scores | 82 |
| 5.5 Spirituality domain and sub-scale scores by group | 83 |
| 5.6 Conclusion | 89 |
| Chapter 6: Discussion | 91 |
| 6.1 Introduction..... | 91 |
| 6.2 Giftedness group effects | 91 |
| 6.3 Sex effects..... | 93 |
| 6.4 Domain effects | 99 |
| 6.5 Confounding factors | 101 |
| 6.6 Theoretical considerations | 105 |
| 6.6.1 MI factors..... | 105 |
| 6.6.2 DMGT factors..... | 110 |
| 6.6.3 DMMI factors | 113 |
| 6.6.4 MSI factors | 114 |
| 6.7 Conclusion | 116 |
| References..... | 122 |
| Appendices | 161 |
| Appendix 1..... | 162 |
| Appendix 2..... | 165 |
| Appendix 3..... | 168 |

List of tables

| | |
|---|----|
| Table 2.1: Gardner's 8.5 MI, with indicators and end-states..... | 13 |
| Table 2.2: Categories of spiritual sensitivity | 44 |
| Table 2.3: Relational consciousness dimensions and elements | 46 |
| Table 4.1: ISIS domains and sub-scales | 77 |
| Table 5.1: Descriptive statistics for Consciousness domain..... | 84 |
| Table 5.2: Descriptive statistics for Grace domain..... | 85 |
| Table 5.3: Descriptive statistics for Meaning domain | 85 |
| Table 5.4: Descriptive statistics for Transcendence domain | 86 |
| Table 5.5: Descriptive statistics for Truth domain | 87 |

List of figures

| | |
|---|----|
| Figure 2.1: The Differentiated Model of Giftedness and Talent (DMGT 2.0; Gagné, 2008) | 23 |
| Figure 2.2: Modified DMGT (Gagné, 2008), with MI adjustment (DMMI) | 26 |
| Figure 2.3: Walton's (2010) Model of Spiritual Intelligence (MSI) | 37 |
| Figure 2.4: Walton's (2010) Model of Spiritual Identity (MSI) – modified | 38 |
| Figure 5.1: Overall spirituality means for Group | 81 |
| Figure 5.2: Overall spirituality means for Sex and Group | 83 |
| Figure 5.3: Group spirituality means by domain | 89 |

Abstract

Gifted students are often credited with higher levels of spirituality than non-gifted students, whether that be overall spirituality or aspects of spirituality. What has not previously been explored, however, is whether this aspect can be distinguished by type of giftedness. The current study aimed to contribute to filling that gap. The process utilised a theoretical framework that combined Howard Gardner's Multiple Intelligences theory with François Gagné's Differentiated Model of Giftedness and Talent. The resulting model, the Differentiated Model of Multiple Intelligence (DMMI; Walton, 2014), grounds spirituality in conceptions of both intelligence and giftedness.

The research sought to answer two research questions: 1) Do students' spirituality levels vary as a function of sex and type of giftedness?; and 2) Do students' spirituality levels also vary as a function of spiritual domain? A causal-comparative design was adopted, utilising an adapted version of the Integrated Spiritual Intelligence Scale (ISIS; Amram & Dryer, 2008). The participants were drawn from three high schools with different gifted specialisations: academic, creative and sport.

As there was no statistically significant difference between the sporting gifted and control scores, these two groups were combined into an extended Control for subsequent analyses. Results indicated that none of the gifted male groups differed significantly from each other in spirituality scores. Scores for the female groups, however, were all significantly different to each other. Academic female scores were similar to all male groups, Creative females scored significantly higher than all other

groups (regardless of sex), while the score for Control females was significantly lower than all other groups (regardless of sex).

Overall, Creative appears to be higher in spirituality than either Academic or Sport, but whether this is due a higher innate spirituality or differences in thought processes is less clear. What is more apparent is that the different expressions of MI which are associated with the giftedness types can influence the level/domain of spirituality. Experiences that broaden aspects of MI should thus also broaden and deepen spirituality.

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To my principal supervisor, Professor Wilma Vialle, I owe more thanks than she would ever accept. Her consistent faith in my abilities, over an extended period, and support where needed are the stuff of legend. Then there is Doctor Steven Howard (aka ‘Stats Man’), without whose sage advice, when statistics were destroying the boundaries of my sanity, this thesis would never have been completed. I stand in awe of both, in their own ways, and offer each a hearty bow to true friends.

For my wife, Hayley, there are no words to adequately express my appreciation for her unstinting and unqualified support. How she puts up with me I will never know, but I love her for it. Our children have grown up over the course of my studies, becoming the people they choose to be. From eldest to youngest: Ciarán, tech whiz/librarian; Goibniu, death metal drummer; Brighid, artist; Angus, martial arts. They are all fine people, yet the time that this thesis has taken has been time that could have been with them. For this I offer my apologies, not least because they have never begrudged me the time to complete it.

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The many hundreds of undergraduates who have been in my lectures and tutorials have been awesome – thank you all for believing. As a final word, I would like to offer special thanks to Pomme Clayton, who taught me to be a storyteller.

Chapter 1: Introduction

And yet, as angels in some brighter dreams
Call to the soul when man doth sleep,
So some strange thoughts transcend our wonted themes,
And into glory peep. (Henry Vaughan, 1622–1695)

Spirituality may be considered as an internalisation of ‘who you are’ (Walton, 2010), an extension of “the eternal human yearning to be connected with something larger than our own egos” (Palmer, 2003, p. 377). This is expressed through your interactions with the world around you, in all its forms. Those interactions are grounded in context, past and present, and personal experience. This simple premise belies the complexity and intricacies of what is perceived as ‘spiritual’, but will be clarified throughout this thesis.

1.1 Framing the research

The central topic of this thesis, ‘Precursor, indicator or mirage: What relationship exists between spirituality and type of giftedness?’, is the oft-conflated relationship between aspects of spirituality and giftedness. This is addressed through two research questions:

- 1. Do students’ spirituality levels vary as a function of sex and type of giftedness?*
- 2. Do students’ spirituality levels also vary as a function of spiritual domain?*

This research is significant, as extant research into the spirituality of gifted children does not distinguish according to giftedness type but, rather, implies that all forms of giftedness may be characterised by a greater degree of spirituality. This includes where a particular spiritual aspect, such as forgiveness or ethical behaviour, is emphasised in gifted children. At times, such aspects are attributed to the individual’s

religion rather than their spirituality. The automatic assumption of a correlation, or interchangeability, between spirituality and religion is discussed elsewhere (see Ch. 3). However, the distinction also impacts upon both the practice of, and attitudes toward, any research in the field of spirituality. For gifted individuals – and giftedness is not dependent upon religiosity – spirituality is an important part of their giftedness. Conceptions of giftedness, regardless of type or culture, routinely include aspects that can be attributed to spirituality. For some gifted individuals it is spirituality itself that *is* their field of giftedness (e.g., Gatto-Walden, 2009).

For a variety of reasons, under-identification of gifted students is a significant issue, not the least of which is the failure of current forms of identification to cater for students who do not fit within imposed conceptions. This is compounded by a tendency for gifted students to ‘hide’ their capacities in order to ‘fit in’ with their peers, resulting in unfulfilled potential and a concomitant loss to society (Davis, Rimm & Siegle, 2011). The most common forms of testing for giftedness are rooted within what would be considered ‘traditional’, academic-type forms of intelligence, as exemplified by the tests for entry into NSW selective high schools¹. Yet giftedness extends beyond this artificial boundary, beyond the threshold of formal expectation.

The primary aim of this research is to establish a baseline for future research into the spirituality of diverse gifted populations, by investigating the spirituality of cohorts that represent different types of giftedness. This will be done by comparison of adolescent groups who can be identified as representative of different intelligences, within the framework of Howard Gardner’s Multiple Intelligences theory² combined

¹ NSW high schools catering solely for students with “superior academic ability” and “exceptionally high classroom performance” (Department of Education and Communities, NSW, 2014b).

² Notwithstanding criticism of Gardner’s terminology, for the purposes of this thesis, ‘intelligence’ is the preferred term, rather than, for example, ‘traits’ or ‘abilities’.

with François Gagné's Developmental Model of Giftedness and Talent. There is also the subsidiary purpose of establishing which groups can benefit most from spiritually oriented learning.

1.2 Framing the researcher

Humans are storytelling organisms who, individually and socially, lead storied lives. (Connelly & Clandinin, 1990, p. 2)

The quote above is in the context of the participants in narrative inquiry but is, nonetheless, a truism that is applicable to all humanity, including researchers of all ilks, whether qualitative or quantitative. This thesis, as does all research, tells a story; one that is inextricably linked to the researcher's schemata – a constructivist process, whereby the individual's combined experiences in, and understandings of, the world are formed through a process of active construction of knowledge (Piaget, 1926, 1960, 1971, 1985). In my case, this includes training as a storyteller at the City Literary Institute in London. What is spiritual is also uniquely personal and, in order to understand my approach, some contextual background is provided.

I was born and grew up in a small town on the south coast of New South Wales. Our house was on a hillside that overlooked the sea. The last thing in my ears at night and the first in the morning was the whoosh and rush of the sea on the shore. It was both inescapable and essential; when we visited relatives away from the coast I could not sleep properly without that soothing soughing. Even now, decades later, I still feel the rhythm implanted on my soul.

When I was a young boy I saw ghosts all the time. Being young, of course, I thought of them as ghosts only because that was the nearest association I could make from my limited experience at the time. Later on, I came to think of them as angels,

even though they did not have wings, because my understanding had come to be framed by a Christian concept. My family was not especially religious, but for some reason it was deemed that we children should go to Sunday School, so we dutifully did. My parents did not really think that one through, though. The church grounds were next to the town's main beach and thus within sight and sound of the sea. At every opportunity my brother and I would heed the sea's siren song and sneak away to the beach. There was an intense sense of connectedness to be felt by the shore that made the Sunday School sermons pale into insignificance and irrelevance. There was nothing spiritual to be found in that place, just the imprint of someone else's concepts, certainly no freedom of thought. Even at that young age I sensed a disquiet at using the term 'angels', because of those imposed concepts, eventually coming to use the more-neutral 'guardians'. What was their purpose? I have no idea, and they did not seem interested in us. I told someone about the guardians once and received such scorn in return that I did not mention them to anyone again, until now.

When I was around six years old, I had a near-death experience. Our family had gone to visit some friends and I went to play on the swing set out the back. This was in the 1960s, so it was one of the really solid ones, with a chunky metal frame and solid steel seats that hung on chains that looked like they could hold a frigate at anchor. I was told later that one of the daughters was particularly attached to the swing set, in a figurative sense. It seems that while I was swinging away she had climbed onto the top of the swing set, pulled up one of the swings and decided that the best way to get me off was to drop the swing seat onto my head. Which she did. I remember falling off and looking up to see my mother at the back door, before a curtain of blood descended and I passed out. The next memory is different because 'I' was not 'me'. What 'I' knew as 'me' was unconscious and had his head held over a basin trying to wash blood off,

whereas ‘I’ was somewhere above looking down at ‘me’ and aware of the turmoil in the adults below. Someone else was with ‘I’ and we had a conversation. It would be lovely if I could recount exactly what was said but, in truth, I only have a vague recollection of the details. At some point, though, I was given a choice – to go away or return. Obviously, I chose to return, and was left with parting words that belong to ‘me’ and ‘I’, not ‘you’.

I have had other ‘life flashing before my eyes’ and revelatory moments since, but these early experiences are what really formed my self, that laid the groundwork for who I am now and the way I approach life. I *know* that spirituality exists independent of religion because I have known spirituality all my life, whereas organised religion has been merely a token player. At the same time, I consider myself to be very religious. Those views are seemingly irreconcilable yet simultaneously exist, without dichotomy. Presenting an understanding of that is partly the point of Chapter 3.

1.3 Positioning a synthesis of research and researcher

The following chapters will pursue the themes already noted. Chapter 2 sets out the framework that the research is positioned within. This is done through an overview of intelligence, with particular consideration given to Gardner’s Multiple Intelligences theory and its implications. A discussion of giftedness follows, which includes Australian policy distinctions. Gagné’s Differentiated Model of Giftedness and Talent is then discussed, as well as the merged Differentiated Model of Multiple Intelligences. Views of spirituality as intelligence or existence are presented, before spirituality and giftedness is discussed. The chapter closes with links between the themes and the current research. Chapter 3 builds on observations made in the literature review, making a case for spirituality and religion being treated as separate entities, without disparaging

either. This is followed by an argument that, while they are separate concepts, each can inform the other.

The chapters directly concerned with the implementation and interpretation of this research start with Chapter 4, which sets out the research method, including aspects of the research design and participant details. Chapter 5 presents the results, organised by hypotheses, with analyses for each. Chapter 6 interprets the results by examining, respectively, giftedness group, sex and domain effects. Theoretical considerations, from the research framework, are also considered, before some concluding observations are presented.

Taken together, it is anticipated that the research will establish that spirituality *does* vary among types of giftedness. This will contribute to theoretical discussions in spirituality, giftedness and the interplay between them. Discussions of practice will follow, with particular relevance to encouraging spiritually oriented learning, in both students and pre-service teachers.

Chapter 2: Literature review

If a few rare prodigious children have spiritual capacities or experiences, then this might imply significance along the lines of research on gifted education or child prodigies. However, if a larger percentage of children have spiritual experiences and capacities, a fundamental revision in how we view children may be required. (Hart, 2006, p. 165)

2.1 Framework

The framework for this research is comprised of a composite of perspectives of intelligence and giftedness. Literature that links spirituality and giftedness is heavily weighted toward theory rather than research, while being devoid of a research base that delineates spirituality by type of giftedness. It is thus necessary for this review to cover intelligence, giftedness and spirituality, insofar as the literature can inform discussion of the confluence of these three areas. Particular attention will be paid to the envisaged comingling of Gardner's Multiple Intelligences (MI) theory and Gagné's Differentiated Model of Giftedness and Talent (DMGT), and how/why they are appropriate vehicles for examining the spirituality of the gifted.

The terms 'gifted' and 'talented' are used in different contexts to indicate individuals who are performing, or have the potential to perform, at a *significantly* higher level than their peers in any specific field of human endeavour (Gagné, 2003, 2009). Rather than engaging in a semantic exercise to differentiate the two meanings, which are not universally agreed upon, this thesis will adopt 'gifted' as a single descriptor, except when discussing Gagné's DMGT, which treats the two as separate. From a historical perspective, giftedness has often been intimately tied to intelligence through its capacity to demarcate higher-ability individuals from those of lower ability.

2.2 Intelligence

Conceptions of intelligence have undergone many changes in the history of humanity, but perhaps none more so than during the twentieth century. For most of that century the Intelligence Quotient (IQ) was a standard measure of intelligence, but was not without its detractors (Bartholomew, 2004; Weiten, 2013). Much of this criticism centred around the nature–nurture debate, with racial implications (e.g., Aaby, 1990; Herrnstein & Murray, 1996; Mensh & Mensh, 1991). If intelligence is a result of genetics, and genetics underlies racial classifications, then it follows that the underperformance of some races on IQ tests would indicate an intellectual inferiority in those races, while affirming the superiority of the dominant culture, the creators of the test (Kaplan & Saccuzzo, 2009; Weiten, 2013). Note the differences in conditioned terminology: the origin is a ‘culture’, even if that culture is dominated by a given race, while the subjects are allocated ‘race’, unless they belong to the dominant culture, which is itself an abstract concept. Concepts of intelligence thus became racially divisive, even when there was a questionable basis (Beatty, 2013).

Adult IQ scores are good indicators of such factors as social and employment status (Brant et al., 2013; Weiten, 2013), but whether an individual develops the capacity to satisfactorily complete an IQ test appears to have its basis, to a large extent, in environment and experiences (including those related to the genetic–environmental correlation), through sensitive periods for cortical development (Brant et al., 2013). Shavinina (1997) noted the importance of sensitive periods to the development of high-level giftedness, referring to them as the “inner mechanism” (p. 250) driver of prodigy. Even when the right genetic, environmental and socio-economic circumstances align, it is questionable whether IQ testing is an accurate indicator of giftedness. Ziegler and Ziegler (2009) suggest that tests of giftedness, specifically intellectual, as could be

applied to the academic domain, are flawed, in that the use of specific cut-off points contributes to the paradoxical attenuation effect, whereby some individuals who are identified as gifted are actually *not* while others who miss out *are*.

Dissatisfaction with IQ as a measure of an individual's intelligence prompted theorists to consider alternative models (for example, Guilford, 1967; Spearman, 1929; Thurstone, 1938). These models had two central tenets: 1) that intelligence could not be encapsulated by a single number; and 2) that the IQ tests only measured a narrow range of intellectual capacities. In the latter decades of the twentieth century two theorists, Robert Sternberg and Howard Gardner, fundamentally altered conceptions of intelligence through a reassessment of what constitutes intelligence.

Notions of a multiplicity of intelligences – that intelligence should not be narrowly defined – are egalitarian based. Each form of intelligence that is acknowledged brings a previously excluded group of humanity into the recognition of their peers. This forms a broader base of cultural value and, by extension, enhances societal attitudes toward the manifestations of those intelligences. This is not to say that people who displayed these 'extra' intelligences were not valued, rather that they were not viewed as 'intelligent'.

2.2.1 Sternberg's triarchic theory

Robert Sternberg believed that the prevailing influence of IQ tests to measure intelligence was detrimental because IQ tests only measure part of intelligence, that is, those factors that are actually measurable. He positioned IQ, *g* and other standardised indicators of intelligence as inadequate, if not misleading, for a holistic understanding of intelligence (Sternberg, 1999b). In this context, his triarchic theory was proposed as a framework for use with gifted children (Sternberg et al., 1996), as it would be better able to identify those gifted students who did not fit the 'standard' profile.

Sternberg et al. (1981) identified the constructs of verbal, practical and social intelligences, forming the basis of his triarchic theory of intelligence, which was composed of componential (which is the closest correlate to *g*; Bartholomew, 2004), experiential and contextual sub-theories. The sub-theories tied in to his definition of human intelligence as a “mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to one’s life” (Sternberg, 1985, p. 45). Since proposing his triarchic theory, Sternberg (2003) has re-categorised intelligence into three different types – analytical, creative and practical (which closely parallel the Greek philosopher Aristotle’s theoretical, productive and practical intellectual virtues; Tigner & Tigner, 2000) – all of which are dependent upon mental abilities, with analytical broadly encompassing the same types of abilities that are measured in IQ tests. This revisioning contributed to an updated definition of intelligence as “your skill in achieving whatever it is you want to attain in your life within your sociocultural context, by capitalizing on your strengths and compensating for, or correcting, your weaknesses” (Sternberg, cited in Plucker, 2003).

As triarchic theory evolved, ‘intelligence’ was refined to “successful intelligence” (Sternberg, 1999b, p. 292), which Sternberg defined as “the skills and knowledge needed for success in life, according to one’s own definition of success, within one’s sociocultural context” (Sternberg, 2004, p. 326). Intelligence is thus positioned as subjective and predicated by the context of application. Rather than an IQ test attempting to fit individuals into a one-size-fits-all standard – performance on which is positioned as being more related to development of expertise (Sternberg, 1999a) than actual intelligence – Sternberg’s approach links the individual to a specific sociocultural context within which success/intelligence is both judged and applied. In support of Sternberg’s model of intelligence, Grigorenko, Jarvin and Sternberg (2002)

noted the potential for triarchic teaching to be more engaging and motivating than ‘regular’ instruction.

While both Sternberg’s triarchic theory and Gardner’s Multiple Intelligences theory have altered the way we view intelligence, it is Gardner’s work that has had the most impact on the educational environment by resonating with educators (Cuban, 2004), with consequent influence on teaching practice (Kornhaber, Fierros & Veenema, 2004). This is evident through such factors as MI-specific schools (e.g., Campbell & Campbell, 1999), differentiation of teaching/assessment (e.g., Hickey, 2004; Hirsh, 2004; Ofrim-Stancuna, 2014; Shearer, 2004) and the stimulus for further research beyond what could have been conceived with a single intelligence concept (Corno, 2004).

2.2.2 Gardner’s Multiple Intelligences (MI) theory

Howard Gardner’s MI theory has its grounding in the principle that each member of the human race possesses a bundle of intelligences, not merely a single IQ-focused intelligence, but that these intelligences are subject to a combination of nature and nurture. A synthesis of such things as opportunity, societal values and talent influence how, if or when these intelligences are manifested and to what extent. Gardner originally identified intelligence as “the ability to solve problems, or to create products, that are valued within one or more cultural settings” (Gardner, 1993, p. x), but this was later refined to the “biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture” (Gardner, 1999b, pp. 33–34). The theory of multiple intelligences originally comprised seven intelligences – linguistic, logical-mathematical, spatial, musical, bodily-kinæsthetic, interpersonal and intrapersonal (Gardner, 1993; von Károlyi,

Ramos-Ford & Gardner, 2003) – all of which met the following set of criteria Gardner devised to qualify as an intelligence:

1. Potential isolation by brain damage.
2. The existence of idiot savants, prodigies and other exceptional individuals.
3. An identifiable core operation or set of operations.
4. A distinctive developmental history, along with a definable set of expert ‘end-state’ performances.
5. An evolutionary history and evolutionary plausibility.
6. Support from experimental psychological tasks.
7. Support from psychometric findings.
8. Susceptibility to encoding in a symbol system. (Gardner, 1993)

Two criteria were connected to each of four fields: biological sciences (1, 5), logical analysis (3, 8), developmental psychology (2, 4) and traditional psychology (6, 7) (Gardner, 1999b). An extra one and a half intelligences were later added (Gardner, 1999b; von Károlyi, Ramos-Ford & Gardner, 2003) – naturalist and spiritual/existential (see Table 2.1). Although meeting all of Gardner’s criteria, significant components of naturalist (related to classification of species in the environment) parallel the classification functions of logical-mathematical intelligence, rendering justification for separation of the two as problematic. The position of spiritual/existential intelligence, as the half intelligence, is discussed under sections 2.2.3 and 2.5.

Table 2.1: Gardner's 8.5 MI, with indicators and end-states

| <i>Intelligence</i> | <i>Core characteristics</i> | <i>Child characteristics</i> | <i>End-states</i> |
|-----------------------|---|--|---|
| Linguistic | Language sensitivity, whether spoken, written or symbolic (sign, body, etc.); functional discernment | Lots of questions; good vocabulary and language skills; word play | author comedian barrister |
| Logical-mathematical | Recognition and exploration of patterns and relationships; utilising logical procedures and/or reasoning | Enjoy puzzles; number play; 'how does it work?'; classify and analyse | scientist detective accountant |
| Spatial | Three-dimensional visualisation of objects and/or materials; orientation, of self or position | Eye for detail; dismantle and build; conceptual; doodles | surveyor sculptor photographer |
| Musical | Musical capacity or appreciation; discern sound patterns | Attuned to patterns of sound; movement and discrimination | composer musician critic |
| Bodily-kinæsthetic | Control of fine and/or gross motor skills | Good hand–eye coordination and balance; gestures; interprets body language | athlete dancer calligrapher |
| Intrapersonal | Understanding of self; strengths/weaknesses, desires, capacities, etc.; guides behaviour | Self-awareness; self-confidence; definite opinions; self-reflective | philosopher artist poet |
| Interpersonal | Sensitivity to the contexts, emotions, motivations, etc. of others; appropriate response | Empathy; relates well to others; mediator | counsellor teacher politician |
| Naturalist | Recognition of features in the natural world, both sentient and non-sentient; distinctions and categorisation | Interest in natural things; empathy beyond humanity; classifies | botanist farmer veterinarian |
| Spiritual/existential | Ability to see and respond to deeper relationships | Daydreamer; deep questions; contemplative | philosopher humanitarian altruist |

(adapted from Gardner & Hatch, 1989; Vialle & Perry, 2002)

Gardner's intelligence categories have been extended, with varying degrees of credibility. Goleman's (2005) addition of emotional intelligence (EQ) is widely accepted, but others appear to have a tendency toward speculative invention. For example, Wigglesworth (2013) promotes a 'physical intelligence' (PQ) that, on the

surface, would appear to be a parallel term for bodily-kinæsthetic intelligence. Wigglesworth's description of PQ as "stamina and good health" (p. 442), however, is clearly more related to physical characteristics than physical application, with no relation to an actual intelligence.

Each individual, regardless of context and/or culture, possesses all of the intelligences to varying degrees (Gardner, 1993, 1999b), although societal input to spirituality is acknowledged (Gardner, 1999b; Tirri, Nokelainen & Ubani, 2006, 2007). As a result, the profiles of intelligence will vary from person to person. A dancer, for example, would be stronger in bodily-kinæsthetic intelligence than a surveyor, whose strength would be in spatial intelligence. Gardner's end-states are essentially indicative of which intelligence an individual is strongest in, but all can be developed and improved.

From a Gardnerian standpoint, given ideal conditions, any individual can develop higher, although not necessarily exceptional, levels of performance in all of the intelligences. Moran and Gardner (2006) identified the interaction of interference, compensation and catalysis as providing contributory factors to intelligence development. Nonetheless, how, and if, particular intelligences develop is influenced by four key factors:

1. Pluralisation – Intelligence is plural, such that there are societal, context-dependent valued capacities that go beyond what is measured in an IQ test. Which intelligence is 'valued', and thus likely to be expressed, will vary both between and within societies and cultures. The intelligences proposed by Gardner were not meant to be definitive, in the sense of being the only possible intelligences. In particular, Gardner has also suggested the possibility of pedagogical intelligence – "the ability to teach others" (Gardner, 2011c, p. 8; see also Rubin, 1989).

2. Contextualisation – An individual’s intelligence is more evident when in a familiar context, allowing expression of that intelligence through valuing within the immediate setting. This also contributes to simultaneously reducing cognitive demands (i.e., the load placed on the mind’s thought processes; e.g., Pollock, Chandler & Sweller, 2002; Sweller, 1994; Sweller, van Merriënboer & Paas, 1998) through the interaction of cognitive functions (conscious and unconscious thought processes; e.g., Jacoby, Yonelinas & Jennings, 1997; Krans, de Bree & Moulds, 2015; Lewicki, Czyzewska & Hill, 1997) and context-specific memory: “an interaction between, on the one hand, certain proclivities and potentials and, on the other, the opportunities and constraints that characterize a particular cultural setting” (Gardner, 1993, p. xiii; see also Johnson, 2002). How, and which, intelligence is utilised is thus a contributor to the context rather than being solely dependent upon it.
3. Distribution – Whereas the focus of contextualisation is the individual, the focus here is on relationships to entities in the environment. Distribution goes beyond the wider cultural context and its associated values, structures and conformities to enhanced performance through the use of preferred tools, whether concrete (e.g., pen, computer), assistive (e.g., files, notebooks) or human (e.g., collegial networks, ego-centric networks; Palchykov, Kaski & Kertész, 2014).
4. Learning environment – An educational environment, both concrete and cognitive, recognises and caters for the varied skill sets of the students, through provision, practice and assessment (Gardner, 2006). The learning environment, however, extends beyond the direct education context. It also takes into account wider governmental structures and support, particularly in relation to investment, as well as the role of family in both preparing children for school and the support needed to get the most out of the children’s education.

While there have been criticisms of Gardner’s concept of MI, criticism of the eight criteria has been minimal. Most criticisms of MI theory are essentially semantic,

relating to consideration that Gardner's 'intelligences' are instead traits, cognitive styles, skills, abilities (Armstrong, 2009; Morgan, 1996) or sensitivities (Tirri, Nokelainen & Komulainen, 2013). Gardner's definition of intelligence as "biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture" (Gardner, 1999b, pp. 33–34) can be misread by critics, who overlook the key component of 'value'. By positioning intelligence as something of value within a social/cultural context, the emphasis is moved from a testable, psychometric-controlled scale to a more-subjective measure.

Perks (2004) addresses Gardner's MI theory using the analogy of a shattered mirror, as an indicator of the fragmentation of intelligence concepts – in the process of delivering a largely political critique for a UK context. His argument is based in 'traditional' intelligence principles, as both a defence and a refutation. This contributes to the structure of his argument being based on a problematic analogy. Perks views the MI concept as representing delineated intelligences, which all need to be approached separately, thus compartmentalising the intelligences through fragmentation, rather than acknowledging their unified nature. While acknowledging that there are no extant standardised tests for each MI, Perks calls for the retention/reinstatement of standardised norms of intelligence, based in traditional, IQ-type values. However, testing, *per se*, is differentiated on many levels and is by no means exclusive, to either MI or IQ.

Gifted students are accepted as being of higher potential and/or ability in their fields than the norm (e.g., Davis, Rimm & Siegle, 2011), with each type of giftedness requiring compliance with criteria for identification that is subjectively and practically different to other types. At the same time, there remains a standardised minimum

component of educational ability that must be attained, and have been attained, regardless of the level of ability in a specialised field. Rather than a fragmentation, this indicates a solid underlying commonality that specialised components can build on, in much the same way that Noam Chomsky's universal grammar underlies all language, regardless of culture (Chomsky, 2006, 2011; Pinker, 2007). Instead of Perks' shattered mirror, a more-appropriate analogy for this interrelationship would be a crystal, where different perspectives are utilised to build a coherent picture of the whole subject, whether that be of intelligence theory or of individual ability.

2.2.3 *Spiritual intelligence*

The concept of a spiritual intelligence is commonly attributed to Howard Gardner (e.g., Emmons, 2000a, 2000b; Meehan, 2010; Sisk & Torrance, 2001; Zohar & Marshall, 2000), which is at odds with Gardner's own position of scepticism toward the actual existence of the 0.5 intelligence of his MI theory (Gardner, 1999a, 2000). He goes so far as to enter into a personal semantic debate as to whether 'spiritual' or 'existential' is a more-appropriate term for this, by his own reasoning, questionable construct (Gardner, 2000). (For a review of the extent to which spirituality meets the criteria of an intelligence, see Emmons, 2000a, 2000b.)

Despite Gardner's reservations, the idea that certain people are gifted in the spiritual field can be considered to be as old as humanity's awareness (e.g., Frazer, 1919). What Gardner's work did was present the concept of a 'spiritual intelligence' as part of a wider redefinition of what constitutes intelligence, which is an ongoing process. The term itself was quickly adopted by sectors of both academia and laity, often as an intuitive response. As Gardner remains sceptical about spirituality qualifying as an intelligence, it raises questions about why it was ever discussed in conjunction with the other intelligences, a move which has been viewed as validation by association.

Vialle (2013, personal communication) suggested that Gardner's inclusion of spirituality as part of the MI discussions was a response to the incessant queries of others, while also linking to his own interest in the area. This yearning for validation of spiritual sensitivities by outside sources has led, indirectly, to 'spiritual intelligence' being inextricably associated with Gardner, despite his protestations of ineligibility. It is notable that Gardner's more-recent work has focused on ethical behaviour and life choices, two areas that fall firmly into the field of spirituality (Gardner, 2011a, 2011b; Gardner, Csikszentmihalyi & Damon, 2001; Harvard Project Zero, 2012).

2.2.3.1 Spiritual or existential?

Broadly speaking, existential relates to existence or, more specifically, human existence, which Principe (1983, 2012) referred to as 'real' and a person's "lived quality" (2012, p. 5). In practice, this translates as experiences and contexts influencing viewpoints and actions. In this light, a relationship between existential, as intelligence, and existentialism becomes apparent, if unintended. According to the French philosopher Jean-Paul Sartre, "a good part of our life is passed in plugging up holes, in filling empty places, in realizing and symbolically establishing a plenitude" (1957, p. 85). Existentialism is inherently individual, but this must be placed within a social context, for it is only through observation and comparison that humanity acquires the benchmarks necessary to be aware of what a 'plenitude' actually *is* in any given context. Similarly, Sartre's observation that "man is nothing else but what he makes of himself" (p. 15) is also set in a wider context, for without a social context there is no position for 'man' to define himself in relation to. Individual subjectivity is the origin, but existentialism "defines man in terms of action" (p. 35), where "action is the only thing that enables a man to live" (p. 36). That individuality, however, cannot exist in isolation or there is no relevance and/or purpose. This is in line with Heidegger's (1961, 1996)

view of the individual's relation to being 'in-the-world' and the inherent subjectivity that entails (Webster, 2004).

Existentialism, as a theory, remains subject to the same scientific and moral thought as all human existence, but it is not limited by them. Rather, it "may be defined as the philosophical theory which holds that a further set of categories, governed by the norm of *authenticity*, is necessary to grasp human existence" (Crowell, 2010; original emphasis). That 'authenticity', lies in the realm of individual spiritual identity, which can provide the overarching conceptual context for the collective human condition. Yet, Gardner notwithstanding, despite the apparent relation of existential to existentialism, along with the clearly spiritual connections within existentialism, there does not appear to be any other reputable author who has actively adopted existential intelligence as their favoured terminology. The hard fact is that 'spiritual' resonates with people in a way that 'existential' does not – 'humanity is spiritual not existential', could be the catchcry.

2.3 Giftedness

Whether referred to as spiritual or existential, if spirituality is accepted as an expression of intelligence then there must be individuals who have a higher capacity than other individuals, just as there must be those with a lower capacity. The identification of that capacity, however, should still be considered within the framework of gifted models. As a precursor to that discussion, attention should be given to how to define giftedness and/or talent.

2.3.1 Definitions of giftedness and talent

Beyond the term 'giftedness' as a common starting point for gifted education, there is little international agreement on the application of the terms 'giftedness' and 'talent',

making a universally accepted definition problematic, at best (Carman, 2013). The only real commonality is that there is an acknowledgement that certain individuals have a higher ability, or capacity, to perform at a significantly higher level than others. Whether gifted and/or talented, such individuals have differing needs from the mainstream at all levels (Fraser-Seeto, Howard & Woodcock, 2013; Shaywitz et al., 2001; Tomlinson, 2005) and can be characterised by affective and cognitive capacities that are beyond that of their same-aged peers (Fraser-Seeto, Howard & Woodcock, 2013; Glass, 2005; Maker & Schiever, 2010; Plunkett & Kronborg, 2011; Shaywitz et al., 2001; Shore, 2000; Tomlinson, 2005). Dabrowski's overexcitability theory accounts for gifted individuals' approach to life, which "is experienced in a manner that is deeper, more vivid, and more acutely sensed" (Daniels & Piechowski, 2009, p. 9), through five forms: psychomotor, sensual, intellectual, imaginal and emotional. Three of these forms broadly parallel the domains of giftedness that feature in this research – psychomotor (sport), intellectual (academic) and imaginal (creative) – although, in practice, the overexcitabilities would not normally be restricted to a single domain. For example, the imaginal/creative fusion would also draw upon the sensual and emotional overexcitabilities, as displayed by Dabrowski himself (Amend, 2008).

Writing in the closing years of the twentieth century, Baldwin and Vialle (1999a, 1999b) noted that "we have moved to a position during the latter part of this century when the construct of giftedness has been expanded to encompass fields of endeavor beyond the scope of traditional views of intelligence" (1999b, p. xiv). An analysis of the literature suggests that there are currently four main usages of the terms giftedness and talent:

1. Synonymic – where 'giftedness' and 'talent' are interchangeable.

2. Compartmental – where ‘giftedness’ is applied to cognitive capacities and ‘talent’ to non-cognitive excellence, such as arts and sport (e.g., Winner & Martino, 2003).
3. Gradated – where lower-level ‘talent’ is developed to reach the higher excellence of ‘giftedness’, with gradations of each.
4. Differentiated – where ‘giftedness’ is potential for high achievement and ‘talent’ is the developed actuality – as in François Gagné’s Differentiated Model of Giftedness and Talent (DMGT; Gagné, 2003, 2008) (see Fig. 2.1).

In Australia, at both state and federal level, there is general acknowledgement (if little funding or action) of the needs of gifted and talented students (Fraser-Seeto, Howard & Woodcock, 2013). In application, how that is expressed through policy varies considerably between states³:

- Both Queensland (Education Queensland, 2008) and Tasmania (Department of Education, TAS, 2000) follow synonymic usage. The Tasmanian Department of Education (2011) submission to the 2012 Victorian inquiry into gifted and talented education, while benefiting from being more recent than Tasmanian policy, and acknowledging the influence of Gagné’s DMGT, is nonetheless still phrased in synonymic fashion.
- South Australian (Department for Education and Child Development, SA, 2012) policy includes Gagné’s original DMGT in the appendices, but the policy itself reads as synonymic.
- New South Wales (Department of Education and Training, NSW, 2004) and Western Australia (Department of Education and Training, WA, 2011) both follow the principles of Gagné’s DMGT, with explicit acknowledgement of the DMGT’s importance.

³ Due to being a ‘territory’ rather than a ‘state’, with associated differences in governance, the Northern Territory is not analysed here. The relevant ‘guidance’ document (Department of Education and Children’s Services, NT, 2013), though, while referencing Gagné, is both synonymic and differentiated at different points, suggesting an amalgam approach.

- Victoria does not have a gifted and talented policy, but the Southwick report into gifted education (Parliament of Victoria, Education and Training Committee, 2012) endorses Gagné's DMGT as the preferred model. It should be noted that there is no specific indication in the report of whether the original or updated DMGT is being supported, however, the tenor of the discussion suggests that this endorsement applies to the updated DMGT.

It should be apparent from this short summation that Gagné's DMGT is influential across much of Australia, with the consequent influence percolating into the other states. There is a need, however, for informed updating of all policies. Two state examples stand out: 1) New South Wales, as the most populous state, may be considered to be the main proponent of the DMGT, yet its policy (Department of Education and Training, NSW, 2004) is now a decade old and utilises the original, underdeveloped, DMGT (Gagné, 2003); and 2) the South Australian policy (Department for Education and Child Development, SA, 2012) is itself up to date, but relies on the outdated DMGT, despite the updated version being available for five years before the policy publication.

2.3.2 Gagné's DMGT

The research discussed in this thesis utilises the updated DMGT⁴ (Gagné, 2008; see Fig. 2.1), through which Gagné considers giftedness to be comprised of significantly higher-than-average *natural* aptitudes in at least one domain, sufficient for an individual to be placed in the top 10% of their age peers in that domain. In contrast, talent applies to significantly higher-than-average *intentionally developed* competencies in a field of human activity, which would place the individual in the top 10% of their age peers in that field. Gifts, in themselves, are not innate (Gagné, 2008), in the sense that they will not automatically be apparent without suitable conditions. Talent, by contrast, is the

⁴ Subsequent reference to the DMGT should be taken to refer to this updated version, the DMGT 2.0.

expression of giftedness that has been developed. Giftedness thus precedes talent, but may not necessarily be developed into talent.

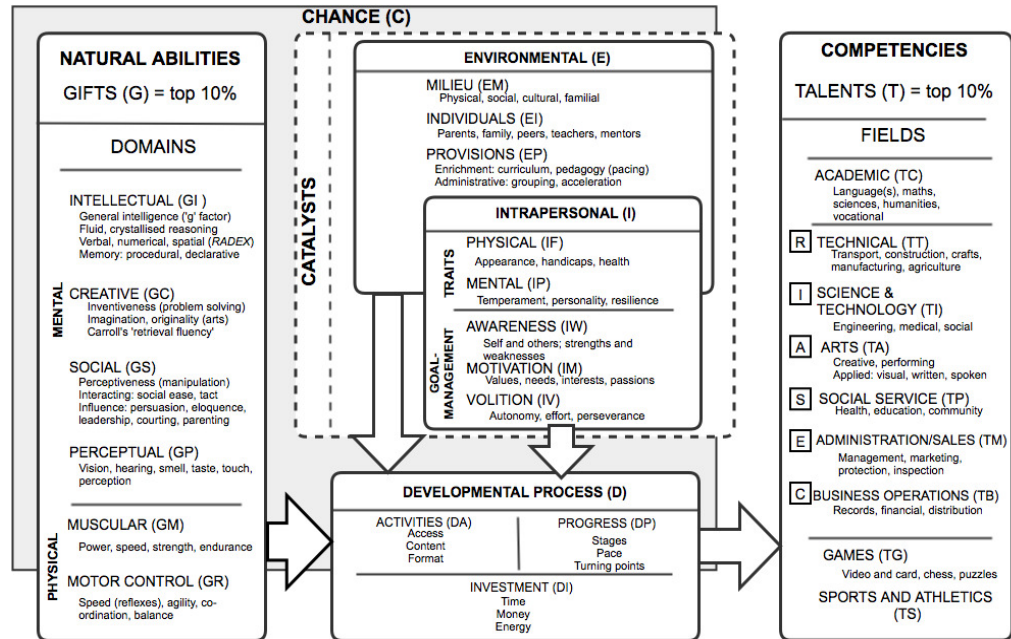


Figure 2.1: The Differentiated Model of Giftedness and Talent (DMGT 2.0; Gagné, 2008)

The DMGT is structured in five separate components, discussed below, all of which are subject to the influence of ‘chance’. Chance (C) takes into account factors that the individual is not in control of but which, nonetheless, influence how the DMGT plays out through “accidents of birth and background” (Gagné, 2008, p. 5). This is fundamentally based in the ‘nature or nurture’ argument, the actuality of which is expressed through genes, environment (including experience) and the genetic–environmental correlation. The five components have as their base, gifts (G), talents (T) and developmental process (D) of talents, which are subject to the catalytic influences of intrapersonal (I) and environmental (E). These components can be described as follows:

1. Gifts (G) – Domains evident through observation of the learning process, speed and ease of acquisition of task-based skills. Two clusters of sub-

components: mental – intellectual (GI), creative (GC), social (GS), perceptual (GP); or physical – muscular (GM), motor control (GR).

2. Talents (T) – Fields of occupational applicability of developed gifts, evident through generally accepted measures of performance in a wide range of occupations: academic (TC), technical (TT), science and technology (TI), arts (TA), social service (TP), administration/sales (TM), business operations (TB), games (TG), sports and athletics (TS).
3. Developmental processes (D) – “the systematic pursuit by talentees, over a significant period of time, of a structured program of activities leading to a specific excellence goal” (Gagné, 2008, p. 2), which is an intentional, rather than accidental or incidental, process. Three sub-components: activities (DA), progress (DP), investment (DI).
4. Intrapersonal catalysts (I) – Two clusters: stable traits – physical (IF), mental (IP); and goal-management processes – awareness (IW), motivation (IM), volition (IV). There is a significant metacognitive factor inherent in (I), through examination and re-examination of values, needs and progress.
5. Environmental catalysts (E) – Three sub-components: milieu (EM), individuals (EI), provisions (EP). Filtered through (I) and thus dependent upon which stimuli are chosen for expression through (I).

All aspects of the developmental process (D) and catalysts (I and E) have an influence on the development of gifts into talent. Although Gagné acknowledges a likely, descending, order of influence – G, I, D, E – he also notes that “talent emergence results from a complex choreography between the four causal components, a choreography that is unique to each individual” (Gagné, 2008, p. 6).

2.3.2.1 Into the basement

Natural abilities are not innate (Gagné, 2009, 2013), rather, they are a result of progressive development, with a biological influence. The biological bases (anatomical,

physiological, genotypic) of Gagné's Developmental Model for Natural Abilities (DMNA) act as 'basements' to the DMGT – the biological counterpart to the DMGT's behavioural focus (Gagné, 2013) – in part precursors but also directors of the talent development process evident in the DMGT. The addition of the basements to the DMGT in Gagné's Expanded Model of Talent Development (EMTD) (Gagné, 2013) does not negate the validity of the DMGT, rather, it serves to inform the biological influences of both individual and external factors. These, in turn, are contributors to the DMGT as it stands, that is, impacting expression of the causal factors without calling into question their applicability. What the EMTD does do is lead to questioning of the role of both genetics and environment in career 'choice' (expressed through talents) and whether it really is such, rather than being a culmination of circumstances that began before conception, in a "choreography unique to each individual" (Gagné, 2013, p. 16).

2.4 MI/DMGT crossover

Utilising an approach that combines the principles of Gardner's MI with Gagné's DMGT appears dichotomous, but the two theories have significant commonalities. The underlying categorisations are different, but both are concerned with the means to turn a potential into an actuality, with MI mapping quite comfortably onto the DMGT (see Fig. 2.2) to form the Differentiated Model of Multiple Intelligences (DMMI). Gagné's gifts (G), underdeveloped natural abilities, align with Gardner's intelligences, as both are concerned with a potential capacity to perform (Gagné, 2009; Gardner, 2006). There is an apparent conflict here between Gagné's concept of giftedness in a *single* domain and Gardner's *multiple* forms of intelligence, all of which are present in every individual. Gardner acknowledges, however, that while an individual will have all intelligences there will inevitably be one in which the individual is strongest, which can

be expressed through a greater aptitude in that intelligence and a preference for working within that intelligence domain (Gardner, 1993, 1999b, 2006; Gardner & Hatch, 1989). This is in line with Gagné (2009), who does not preclude an individual having abilities in other domains – in effect, giftedness is the potential expression of the dominant intelligence.

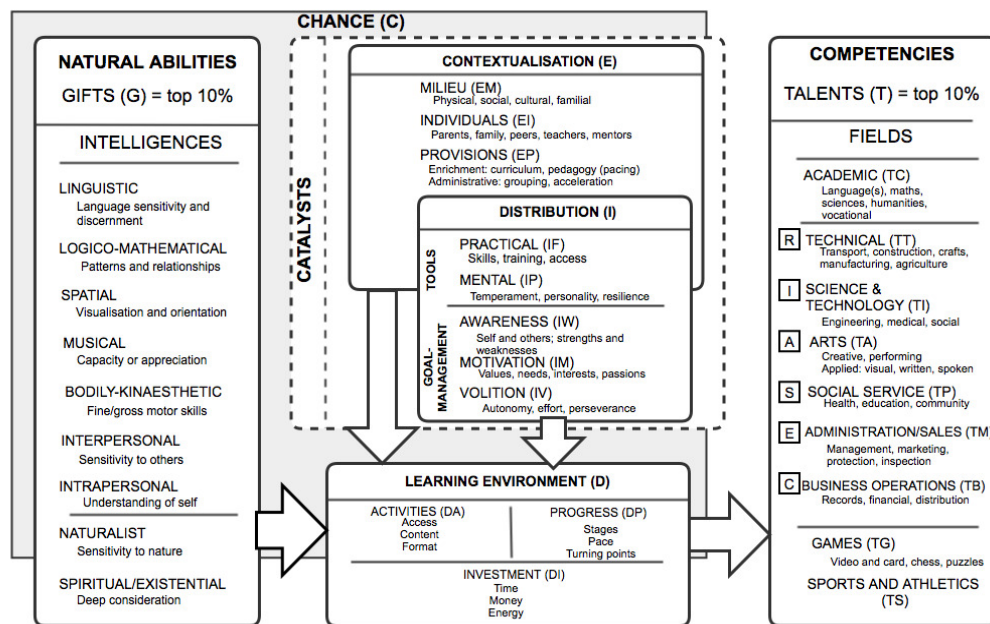


Figure 2.2: Modified DMGT (Gagné, 2008), with MI adjustment (DMMI)

At first glance, the DMGT catalysts (E – Environmental; I – Intrapersonal) would appear to be problematic for linking to MI theory. These need to be viewed within the framework of the MI factors of contextualisation and distribution, with the latter being dependent upon the former (Gardner, 2006). Environmental (E) ties directly to contextualisation, through the context-specific characteristics of Milieu (EM), Individuals (EI) and Provisions (EP), all of which provide both impetus and background for the expression of intelligence/giftedness. Distribution is less clear-cut when linked to Intrapersonal (I). However, when viewed as a reciprocant of Environmental/Contextualisation, a contextualised theatre appears for the assessment of what is ‘valued’, with the expression of the enhanced performance in an area being

dependent upon the value assigned to it through the sub-components of Contextualisation.

The same argument extends into the use of preferred tools, both practical and mental (rather than physical and mental traits in the DMGT), of expression of giftedness/intelligence, which are also subject to the value assigned to both tools and expression in Contextualisation. This is the only part of the talent/intelligence development process where a change in the sub-categories is necessary, where Gagné's Physical (IF) trait becomes the Practical tool. Both complement the Mental (IP) sub-category, but with a different focus. The individual's physical expression in the DMGT has effectively been superseded by the biological basements. What is left has primary relevance to how the individual is perceived by others, rather than what the individual can do, and how that impacts Mental (IP). Instead of physical attributes, in the DMMI the role of Practical is focused on the physical means to achieve higher understanding.

Developmental process (D) can be equated to the factor of Learning environment (Gardner, 2006), where the individual teacher and the prevailing education system as a whole contribute to providing the medium for learning and expression (Gardner & Hatch, 1989). In this instance, only the name changes, as all of the sub-components (DA – Activities; DP – Progress; DI – Investment) are intact, applying to both Developmental process and Learning environment. The teacher is in charge of the micro-environment for the student, providing learning experiences and direction, in line with the macro-environment dictated by the relevant government educational body. The effectiveness and applicability of this process will be influenced by both Contextualisation/Environmental (E) and Distribution/Intrapersonal (I).

Talents (T), or MI end-states, are the developed expression of a gift in specific domains. These talents would be the application of highly developed intelligences in

Gardner's MI within an occupational or avocational field. For example, someone with an outstanding ability within the interpersonal intelligence would be eminently suitable for employment in Social service (TP), or some aspects of Administration/sales (TM). There is no need to amend this component of the DMGT to match it with MI, as both link directly to the expression of gifts/intelligences through occupational categories.

For both MI and DMGT, Chance (C) is a constant factor, particularly in relation to whether an individual has the opportunity to be aware of, and develop, their particular gift(s)/intelligence(s). These linkages preserve Gagné's suggested, descending, order of influence – G, I, D, E – through correlating gifts with intelligences (G), which can be expressed through enhanced performance that is grounded in intrapersonal characteristics (I), while being nurtured during the learning process (D) and situated within the value-laden context (E). Gardner's MI are latent intelligences, which may potentially be gifts, in that while all individuals have all of the intelligences it is only those intelligences an individual possesses which have higher potential that can be gifts. The expression and application of talents (T) is thus an end-state in itself for both MI and DMGT.

The DMMI thus provides an opportunity to validate the DMGT, as a model for gifted and talented development. That the DMGT's underlying principles can be applied to an unrelated theory is a good indicator of both validity and versatility, of the common grounds evident in development. This is not to suggest that either MI theory in itself or the DMMI can be used as an identifier of gifted students, just as the DMGT can not, nor that because everyone has all of the intelligences that everyone can be gifted, which Gardner specifically argued against (Gardner, 1997). MI, DMGT and DMMI are not diagnostic tools. They are prisms that allow light to be shed on aspects of commonality in development, while maintaining the integrity of each. In the process of recognising

what is common lies the opportunity to develop a greater understanding of how theories overlap – that what is perceived by one person to be specific to their field actually transcends that field and can inform both understanding and application in another.

2.4.1 Linking spiritual intelligence to giftedness

Giftedness is implicit in the term ‘intelligence’, because it is a way of differentiating and valuing those of a higher ability, whether potential or actual. While spiritual intelligence itself applies across cultures, by extension this also means that the expression of spiritual intelligence will have different manifestations in different cultural contexts. Giftedness, by contrast, appears to be imbued with a common thread of spiritual intelligence that appears regardless of cultural context (Ambrose, 2009), which Piechowski (2009) linked to higher levels of energy in gifted children. The spiritual thus can be both a form of giftedness and a common denominator, with the potential for development.

The updated six profiles of giftedness identified by Neihart and Betts (Neihart, 2010a, 2010b) contain recognisable indicators that can be linked to spiritual intelligence. Indeed, spiritual intelligence, and thus spirituality, is an apparent underpinning component of the profiles. The indicators are particularly evident in ‘The Creative’ profile through, for example, “wants to right wrongs” and “stands up for convictions”. Moral motivations such as these are the basis of ethical behaviour. The development of ethical sensitivity is stronger in gifted students, particularly female gifted, as supported by the research of Tirri and Nokelainen (2007), who attribute this to gifted students’ “precocious intellectual growth” (p. 598). Nonetheless, expression of moral considerations needs an outlet, a purpose. Juratowitch (2010) discussed the concept of ‘flourishing’, which is expressed by the gifted through a concern for and place in the world, which is inherently linked to the need for social support to be happy

and having opportunities to give back to society (Johnstone, 2014). The twin factors of individual (personal happiness) and collective (giving back) are also evident in Miller's (2005, 2010) research with Maori gifted children, which led him to identify the two most identified characteristics of Maori gifted children as: 1) outstanding personal qualities and high moral values; and 2) service to others. The context of culture also influences the expression of spiritual intelligence (Whiteoak, 2010; see also, Whiteoak, 2015), while a lack of connection to culture/society adversely affects the individual's personal balance and spiritual intelligence (Whiteoak, 2010, personal communication).

Just as spiritual intelligence is the undercurrent that links aspects of giftedness, cultures are not mutually exclusive – spirituality, and through it spiritual intelligence, is the commonality that binds humanity together (Levin, 2001; Van Ness, 2012) and “gives meaning to life” (Gardner, F., 2011, p. 32). The stumbling block in this field is ‘intelligence’ and its annotation to ‘spiritual’. The two terms are not automatically conjoined, but neither are they mutually exclusive. Indeed, in the vast majority, if not all, instances of an author using the double-headed ‘spiritual intelligence’ what they are actually referring to is spirituality, as there is no, or limited, consideration of the cognitive functioning inherent in ‘intelligence’. This does not preclude spirituality from being considered as aligning with the DMGT, in association with Gardner's MI. It does suggest, however, that establishing clarity of terminology is necessary, for the discussion to progress.

2.5 A place for the spiritual

Sineta (2000) noted that “in principle, the word ‘spiritual’ is a neutral term” (p. 18). In practice, however, there is a multitude of concepts that can be applied to spiritual. It is heavily loaded with meaning and associated contexts, varying between individuals and

cultures, at both micro and macro levels. This view is supported by authors such as Cavanagh et al. (2004) – “there is no such thing as generic spirituality” (p. 119), with spirituality being dependent upon context and practice. Spirituality consists of a synthesis of ‘worldview’ – “a perspective on the world and the place of human life within it” (p. 119) – and ‘path’ – “a set of practices that nurture and express the worldview in one’s life” (p. 120). Such a view places spirituality at the congruence of individuality and society, as collective. The framework thus provided permits a set of beliefs and expectations that contribute to the individual’s perspectives on how to interact with the world, in the process of establishing and maintaining a balanced emotional, psychological and essentially social existence (Hay & Nye, 1996; Moritz et al., 2006; Saucier & Skrzypińska, 2006). This is particularly evident in the context of ethical behaviours (Büssing et al., 2010; Hay & Nye, 1996). There is, however, no universally agreed definition of what spirituality *is*, but a wide variety of componential considerations.

2.5.1 Spirituality as intelligence

Spiritual intelligence (SI) is viewed by Gardner (1999a, 2006) as only 0.5 of an intelligence yet, according to Sisk and Torrance (2001), it has an integrative function for the other intelligences, “enable[ing] them to achieve the highest realization of human nature” (p. 7), but “is not about organized religion” (p. 12). Indeed, the secular humanistic aspect of spirituality is described by Büssing et al. (2010) as “vital” (p. 41) for adolescents. Myers, Sweeney and Witmer (2000) introduced a revised version of the Wheel of Wellness, one of the components of which is ‘spiritual wellness’, where spirituality is “the source of all other dimensions of wellness” (p. 253; see also Briggs & Rayle, 2005), such as self-concept and relationships. In this model spirituality is conceptually broad, ‘private’ (i.e., personal) and grounded in “wholeness or

connectedness to the universe” (Myers, Sweeney & Witmer, 2000, p. 252). This is in contrast to religiosity, which is positioned as narrower, ‘public’ and subsidiary to spirituality. For primary-aged children, Clifford’s (2013) research established a link between spiritual education and self-regulation of behaviour. Others have connected educating for positive spirituality to increased resilience, reduced depression and risk taking (e.g., Cotton et al., 2005; Damon, Menon & Bronk, 2003; Fraser, 2004; Miller, 2000; Ozaki, Kobayashi & Oku, 2006; Pargament, 2007; Tan & Wong, 2012; Taplin, 2011). Thus, rather than being an isolated concern, research has found spirituality to have broad relationships to a wide range of positive outcomes, which can also be enhanced by spiritual education/intervention. Spirituality is thus an important facet of every student that educators *must* recognize and cater for. Given these positive outcomes, West’s (2011) assertion that the educational environment, as it applies in New South Wales, is not catering for spirituality is particularly worrying.

By definition, if only at a purely semantic level, spiritual intelligence must have spirituality as a component, which is the line of reasoning that was followed by Hay and Nye (2006) for their investigation into children’s spiritual lives. However, while there is a relationship between the two, they are not interchangeable. The differences and commonalities between spiritual intelligence and spirituality are moot, but the discussion may not even be relevant to spirituality, just an issue of semantics. This is certainly the approach offered by both Howard Gardner and critics of his MI theory, where both agree that there is no spiritual intelligence, albeit for differing reasons.

The criteria established by Gardner (1993) for an intelligence to qualify as such present notable obstacles for spirituality, such as Mayer (2000) suggesting that the abstract reasoning necessary for intelligence is not evident in spiritual intelligence, which would be more-appropriately titled spiritual consciousness. Chief among these

obstacles are differing perspectives on what constitutes spirituality. Without a clearly defined understanding of what spirituality *is*, in relation to Gardner's MI criteria, support from experimental psychological tasks (Gardner's sixth criterion) and support from psychometric findings (Gardner's seventh criterion) become particularly problematic, tending toward a matter of subjectivity. Subjectivity also bedevils [sic] the existence of idiot savants, prodigies and other exceptional individuals (Gardner's second criterion). Any attempt to establish who would qualify as being highly gifted in spirituality would become a competitive tender process, where the various religions promote their favoured deity and adherents as being above all others, to the detriment of humanity (Paul & Elder, 2009). These qualifications notwithstanding, Gardner is in the, likely, unique situation of being a critic of a concept that he is perceived as having promoted. As elaborated in section 2.2.3, Gardner (2000) doubts whether spiritual could ever qualify as an intelligence, engaging in a partly semantic debate with himself over the attributes of 'spiritual' and 'existential', with a preference for the latter, potentially based in Gardner's difficulty in forging a personal conceptual separation of spiritual from religious.

Gardner's belief that spirituality cannot be accepted as an intelligence also informs his arguments against the premise of a commonality of intelligence (e.g., Gardner, 1999b), that there could be one intelligence upon which all other intelligences depend, as proposed by authors such as Sisk and Torrance (2001). Rather than being a discrete intelligence, spirituality may actually underlie all other MIs – the ninth intelligence as a unifier. The question would then become one of how spirituality could be considered within MI theory. However, the very detail that stops spirituality from being declared the ninth MI, Gardner's criteria for intelligence, may actually provide clues as to why it should be. For point one of his MI criteria ('potential isolation by

brain damage’) to be accepted, a specific region of the brain needs to be associated with the functioning of an intelligence. If there really is a unifying intelligence (e.g., Sisk, 2008) then it would not be restricted to a single type of functioning. What would be more evident for a unifying intelligence are aspects of that intelligence being present in different areas of the brain. For example, such aspects of spiritual identity as empathy have been found to have correlates in brain activity (Seitz, Nickel & Azari, 2006), with Gu et al. (2012) identifying the anterior insular cortex as the seat of empathy. In turn, empathy is a key part of “intersubjective relations” (Gallese, 2005, p. 103), through forming a “self–other identity” (p. 104). The mental ‘ability’ to apply empathy is part of the transference from a personal spirituality to spiritual identity. It is the action of acting upon empathic impulses that connects ‘ability’ to ‘action’. This can be seen through the primate research of Chang, Gariépy and Platt (2013) where links to primitive empathy helped identify the anterior cingulate gyrus as playing a key role in altruism, an ‘action’ function. The spirituality of an individual is not restricted to single-area brain functioning, which suggests that a wide variety of influences could influence spiritual development. Following a stroke that neutralised her left-hemispheric functioning, Jill Bolte Taylor (2008; Tweedy, 2012) experienced her world in a manner that suggests the right hemisphere’s dominance for spirituality, prompting her to describe it as “the seat of my divine mind” (Taylor, 2008, p. 140).

Emmons (1999, 2000a, 2000b) provides eloquent arguments against Gardner’s seeming abandonment of the intelligence that he fostered, linking to the emotive nature of spirituality as a fundamental component of being human (James, 1963; Oberski, 2011; Tirri & Quinn, 2010; Tisdell, 2003; Van Ness, 2012; Zohar & Marshall, 2000). Sisk (2008) followed this train of thought to suggest access points for engaging the spiritual intelligence of gifted students, in the process classifying spiritual intelligence

as SQ, characteristics of which include “connectedness, compassion, responsibility, balance, unity, and service” (Davis, Rimm & Siegle, 2011, p. 274). Other authors extend on the intelligence categories. Tirri and Nokelainen (2008) included environmental intelligence, but not naturalistic intelligence, in their research into MI assessment and spirituality. Goleman (2005) promoted emotional intelligence (EQ) as an adjunct to IQ (Matthews, Zeidner & Roberts, 2002; Piechowski, 2003), both of which Zohar and Marshall (2000) tied to spiritual intelligence (SQ), with the three components being separate but interrelated. Following the inter-relationship thread of intelligences, Lin (2006) suggested that intelligences are not discrete entities and that schools should aim toward developing an ‘integrated’ intelligence, comprised of IQ (intellectual), EQ (emotional), MQ (moral), SQ (spiritual) and ECOQ (ecological). Spiritual and moral intelligences are positioned by Lin (2006) as separate entities, despite being intimately related, if not parallel aspects of the same construct, while ECOQ also comprises aspects related to spirituality. This extended delineation of roles, while attempting to clarify the varying intelligences and make holistic linkages, actually reduces the clarity of what spiritual is perceived to be.

It is curious that these authors, while referring to ‘intelligence’, use ‘Q’, quotient, rather than ‘I’, intelligence, in the acronym. Apart from being grammatically erroneous and structurally peculiar, quotient and intelligence are hardly synonymous, otherwise IQ would be rendered as II. What is suggested is that these authors are trying to align their ‘intelligences’ with the perceived validity of IQ and its standardised, objective measurement, but that, through their respective discussions, make it evident that it is spirituality – hence, spirituality quotient (SQ) – they are referring to, rather than spiritual intelligence. From Gardner’s perspective, intelligence is inherently to do with application, rather than purely intrapersonal purposes. Amongst those promoting

spirituality as an intelligence, then, there is an incongruity that can only logically be resolved by SQ referring to spirituality itself, rather than an actual intelligence.

2.5.2 Spirituality as existence

Once it is accepted that spirituality has validity in its own right, without the ‘intelligence’ rider, consideration of aspects of spirituality can be addressed. Not least of these is forming a judgement of how wide the applicability should be for spiritual, that is, what are spirituality’s boundaries.

In the 1901–1902 Gifford lectures, William James (1963) provided a clarity of approach to spirituality that can still be applied today. While ostensibly in the field of ‘religious experience’, the lectures allowed James to range quite broadly in his discussions, as well as make a distinction between objective and subjective experience – broadly paralleling Heelas and Woodhead’s (2005) life-as and subjective-life. In the process, James expressed many views that were not defined by relationship to a particular religion, rather, he made distinctions between religion and spirituality, with religion being an expression of spirituality, where the essence of humanity could be found in the spiritual impulse (a position supported by Van Ness, 2012). James positioned spirituality as a human birthright, the expression of which was predicated by an individual’s experiences and influences, with an emphasis on the transformative nature of the subjectivity of personal spiritual experience. Religious experience could, thus, only be validated by a spiritual judgement, grounded in the triumvirate of “*immediate luminousness* [enlightenment] ... *philosophical reasonableness*, and *moral helpfulness*” (James, 1963, p. 18; original emphasis). Although James’ ideas are not without their critics (e.g., Rydenfelt & Pihlström, 2013), he distinguished himself from other contemporary, and later, writers on religious experience through a concrete separation of his own religious context from the parameters under discussion. He did

not allow his personal religious views to influence his philosophical views and their expression, and the bias that would have applied (see Ch. 3).



Figure 2.3: Walton's (2010) Model of Spiritual Intelligence (MSI)

In hindsight, Walton's (2010) Model of Spiritual Intelligence (MSI; see Fig. 2.3) has much in common with James. The single complicating factor in the MSI is the use of 'spiritual intelligence' as the output. Developments in understanding of both intelligence and spirituality, as well as their applications and cognitive resonance, have meant that the output component of the model has since been modified to 'spiritual identity' (see Fig. 2.4). This aligns with Moriarty (2011), who suggested that the purpose of spirituality is to move toward "a coherent and meaningful sense of identity" (p. 282), applied through individual worldview.



Figure 2.4: Walton's (2010) Model of Spiritual Identity (MSI) – modified

In line with the Stoic view of philosophy, that it “engages the whole of existence” (Hadot, 1995, p. 83), personal spirituality – all spirituality is personal, comprising a “‘signature’ tied to one’s personality” (Hart, 2006, p. 165) – is comprised of everything the individual has come in contact with (*input*). There are two levels to the input’s conceptual reasoning – culture and experience, offering a connectedness that is linked to levels of resilience (Dent 2005; Raftopolous & Bates, 2011), although “too much emphasis on the individual’s experience ignores the underlying collective experience” (Gardner, F., 2011, p. 53). Culture, at a macro level, refers to the dominant societal expectations and values within which the individual exists (Ratner, 2012a, 2012b). At a micro level, how these expectations and values impact upon the individual contribute to an understanding of their place, their standing in the world and their responsibilities (Branco & Valsiner, 2012; Heise, 1996). The effects of the micro component can be mitigated or exacerbated by the individual’s experiences, through contact within the dominant culture and contact with alternative cultures (Branco & Valsiner, 2012; Eretz & Gati, 2004). The influence of culture and experience provide the input to the self, whereby a personalised understanding is formulated by the individual (Ratner, 2012a, 2012b). Implicit ownership of this understanding is evident

in Sartre (1957), who observed that “everything which happens to me is *mine*” (p. 53). The process of internalisation provides the structure for the individual to approach the world, with spirituality a result of the synthesis of culture and experience (*self*). From a child’s perspective, spirituality is, thus, not “separate and transcendent” (Hart, 2006, p. 166) but an immanent ‘right now’.

How this personal, internalised spirituality is expressed provides the *output* of the process, where “both thought and feeling are determinants of conduct” (James, 1963, p. 504). The interactions the individual has, at macro and micro levels, are expressions of their personal spirituality, as it exists at a given moment in time. This expression of spirituality through action is what constitutes an individual’s spiritual identity. However, spirituality is essentially fluid, as each new experience or change in context has the potential to impact upon the individual. As such, while the expression of spirituality *is* spiritual identity that identity is also fluid. The level of each is not necessarily analogous. For example, if an individual’s spirituality has internalised the concept of freedom of expression as a right, then choosing – and life is full of such choices, based in experiences and the value attributed (Jordan, 1986) – to stay silent when another person is at risk of losing that right is against personal spirituality, with consequent adverse impact upon spiritual identity.

In the MSI, the difference between spirituality and spiritual identity can be simply described as what you take in versus what you do with it. Spirituality thus directly influences the practical expression of spiritual identity, however, *spirituality does not become spiritual identity until it is internalised and applied, whether that be through actions or thoughts*. This process of transferring the spiritual into an expression of spiritual identity was described by Noble (2009), in a discussion of spiritual intelligence, as the need for each individual to “mindfully integrate ... [spiritual

experiences] ... into the totality of his or her personal and community life” (p. 821). According to Noble, this process is an active one, something that it is necessary to consciously devote cognitive resources to.

Complementary to Noble’s active processing, there is also a passive viewpoint. Gibson and Landwehr-Brown (2010) made a distinction between ‘ethics’ and ‘morals’ (building on Gibson, Rimmington & Landwehr-Brown, 2008), with ethics being based in a value system while morals is acting upon the value system. In this view, ethics is firmly grounded in context of culture, the experiential process of acquiring a value system through exposure to societal norms and mores (Ambrose & Cross, 2009; Sternberg, 2009, 2011, 2012). This has parallels to the spirituality component of the MSI (Fig. 2.4), which is reinforced by Gibson and Landwehr-Brown’s ‘morals’ concept, the application of ethics to the value system to negotiate an active response (Ambrose & Cross, 2009), which is akin to the spiritual identity process already described.

There are also parallels to Schoonmaker’s narrative analogy, building on the research of Hyde (2008d), where “children construct meaning from personal experience, within their own personal narrative, and it is through this narrative that they express their spirituality” (Schoonmaker, 2009, p. 2716). The constructed narrative is simultaneously individual and collective. Whiteoak (2010, personal communication) made an explicit connection between the expression of spiritual identity and the context of culture (see also Niederer & Russell, n.d.; Russell, 2010), with specific reference to Australian aboriginal communities, with disconnection from culture linked to a destructive cycle for the individual. In Maori culture, kahupō (‘spiritual blindness’) is a factor in suicide prevalence (Emery, Cookson-Cox & Raerino, 2015). But cultures are not necessarily mutually exclusive. Büssing et al. (2010), when framing their research

into adolescent spirituality, concluded that spirituality, and by implication spiritual identity, is the commonality that binds humanity together, as “an attribute of all human beings” (p. 27).

Early shamanist and animist societies (Campbell, 1984) exhibited their spiritual awakening through close connection with the components of their environment and humans’ interaction with such. This extends into modern indigenous conceptions of the spiritual, where the spiritual is inextricably linked to the ‘spirituality as existence’ factor, encompassing the totality of life. For Australian Aborigines, the concept of a holistic connection is the philosophical ‘core’ of spirituality (Grieves, 2008, 2009)⁵, with explicit connection to social and emotional wellbeing (Grieves, 2009). Aboriginality itself is grounded in community and “has much to do with kinship, relationships and spiritual values” (Taylor, 1999, p. 44), although Taylor also cautions against overgeneralising of perspectives to all Aboriginal people. Irwin (2000), in relation to Native Americans, acknowledged “the need to engage Native peoples in ways that fully recognize the value of the person (and personal experience) as central to the formulation of Native spirituality” (p. 7), while Hodge and Wolosin (2015) observed that, for many Native American cultures, spirituality is a significant contributor to health and wellbeing, with respect as a key component. Similar sentiments apply to other indigenous groups. Espinosa (2009), in a study of Amazonian tribespeople who had adopted aspects of non-traditional culture, recognised that “ethnic spirituality defines daily life behavior and attitudes” (p. 427). For Maori, spirituality complements the “physical, emotional, intellectual and social” (Fraser, 2004, p. 88). The common theme among these indigenous groups of an interconnection between spirituality and social and emotional factors complements that of the Department of Education and

⁵ Grieves (2009) prefers ‘wholistic’, as a description of “a matter in its entirety” (p. 1).

Communities, NSW (2015). The *Wellbeing Framework for Schools* is premised on the importance, for all students, of the four pillars of children and young people's "physical, social, emotional and *spiritual* development" (p. 2; emphasis added), and how each pillar influences the others.

In Hill et al.'s (2012) attempt to find commonalities and differences for spirituality and religion, based in literature rather than research, they identified criteria for the two concepts. The base criterion for each, the commonality, was the same:

The feelings, thoughts, experiences, and behaviors that arise from a search for the sacred. The term 'search' refers to attempts to identify, articulate, maintain, or transform. The term 'sacred' refers to a divine being, Ultimate Reality or Ultimate Truth as perceived by the individual. (Hill et al., p. 155)

Setting aside issues apparent when creating a homogeneous criterion for spirituality and religion, of more interest are the additional criteria that are specific to religion – there are none for spirituality – both of which appear counterintuitive. The second criterion for religion relates to "a search for non-sacred goals (such as identity, belongingness, meaning, health, or wellness)" (p. 155). Jones (2007) suggests that what is considered 'sacred' differs according to what the individual values, from a personal, non-uniquely religious, perspective. The allocation of 'non-sacred goals' as belonging exclusively to religious precepts explicitly removes the possibility of the non-sacred from spirituality and non-religious adherents. Despite the objective illogicality of this position, Hill et al.'s third criterion for religion compounds the confusion, although in the process it betrays a religious bias (see Ch. 3), where religion, but not spirituality, "receive[s] validation and support from within an identifiable group of people" (p. 155). From this perspective, the "legitimation" (p. 159) of organised groups of people who share the same ideals and the same sense of who they are can be religious, but not

spiritual. For this criterion to be valid, the Atheist Foundation of Australia, as an identifiable group for validation and support, would be religious, which runs counter to their aim “to serve as a focal point for non-religious people” (Atheist Foundation of Australia, 2014).

The criteria devised by Hill et al. (2012) specifically relegate the search for identity, with consequent expression of identity, to a religious provenance, in direct contrast to the MSI. Pawluczuk (2009) also drew on a religious background, but in the process extended the notions that are evident in the MSI to express the development of national and cultural identity, through the concept of a “symbolic universe” (p. 57), where cultures cross-fertilise each other to form a collective identity. The national identity is thus a collective correlate for individual spiritual identity. Individual spiritual identity is also the undercurrent that links aspects of giftedness.

2.6 The influence of contemporary spiritual models on the current research

Meehan (2010) noted that “Gardner does not add spiritual intelligence to his list because it can not be quantified and measured”. While this is an appropriate observation in relation to spiritual intelligence’s place in Gardner’s MI theory, there are extant studies in the field of children’s spirituality that have contributed to categorising the components of spirituality, some of which will be discussed, with particular emphasis on an Australian context.

Nye (1998) viewed spirituality as a flowering process, driven by internal growth processes rather than external influences (Schoonmaker, 2009), in an effective nature–nurture analogy. Building on Hay and Nye (1996), Nye (1998) utilised three categories of spiritual sensitivity, with sub-categories, as a conceptual–theoretical basis (see Table 2.2).

Table 2.2: Categories of spiritual sensitivity

| <i>Category</i> | <i>Sub-category</i> |
|-------------------|---------------------|
| Awareness-sensing | Here-and-now |
| | Tuning |
| | Flow |
| | Focusing |
| Mystery-sensing | Wonder and awe |
| | Imagination |
| Value-sensing | Delight and despair |
| | Ultimate goodness |
| | Meaning |

(Source: Hay & Nye, 2006, p. 65, from Nye, 1998, p. 129)

Following a grounded theory analysis of qualitative data, these provisional categories were superseded by ‘relational consciousness’. Hay and Nye’s (2006) relational consciousness provided the overarching framework for subsequent division of that concept into five dimensions and their associated elements (see Table 2.3). This alternative umbrella concept allowed children’s spirituality to be discussed without using the actual term ‘spirituality’. While the initial categories partly arose from the pilot stage of Hay and Nye’s combined research output, they were based in Hay and Nye’s intuitive perception, as well as being “hinted at in the converging evidence of other writers on spirituality and child psychology” (Hay & Nye, 2006, p. 64). As such, given how much has been gained from subsequent research, there is no concrete basis for the continuing use of these categories. The intention of the authors was for the categories to be considered as a starting point only, a provisional attempt at imposing a structure on an unruly subject. These categories, however, were used to underpin the major Australian studies of children’s spirituality undertaken by Vialle, Walton and Woodcock (2008; see also Vialle, 2007) and Hyde (2008c), as discussed below, as well as Nemme (2008). They also continue to contribute to international research in the field (e.g., Tirri, Nokelainen & Ubani, 2006, 2007; Tirri & Quinn, 2010). In particular, Tirri,

Nokelainen and Ubani (2006, 2007) extended Hay and Nye's three 'sensing' categories by including 'community-sensing', following the work of Bradford (1995). This extra categorisation acknowledged the valued role of social context in spirituality.

In their investigation of children's spirituality, Vialle, Walton and Woodcock (2008) used Nye's (1998) categories of spiritual sensitivity (Table 2.2) as a theoretical starting point for qualitative focus groups with primary students, selected from public and Catholic K–6 classes. There was, thus, a balance between secular and non-secular schooling systems. The discussions centred around artefacts, with a conscious decision being taken to avoid asking direct questions about, or making reference to, either religion or concepts of godhood. This is not to say that the students did not raise these factors, rather that they were not prompted to and, when raised, did so spontaneously. The absence of researcher-generated prompting/positioning allowed the students' voices to be both dominant and pre-eminent. The seven identified themes, which appear to be distinct facets of spirituality, were:

1. links to knowledge and personal experience – “We know when there's spiders about because there's spider webs” (p. 151)
2. importance and utility – “They are [important] to me because they are fun to play with ... it is nice to have a collection of shells” (p. 152)
3. importance and aesthetics – “They make the sky nice because the birds are colourful” (p. 152)
4. importance and uniqueness – “It's somehow got a connection to what something else does. It's pretty unique” (p. 152)
5. the nature of Nature – “They're nature and special to us as part of the family” (p. 153)

6. 'circle of life' – "I think the water is much more important because if we didn't have water we couldn't survive" (p. 153)
7. learned concepts – "If you've done something cruel to another animal you can whack yourself on the head and that can be karma for you" (p. 154).

These themes exhibit elements of both spiritual sensitivity categories (Table 2.2) and the 'concepts' dimension of relational consciousness (Table 2.3), so can not be wholly attributed to either.

Table 2.3: Relational consciousness dimensions and elements

| | | | |
|-------------------|---|---------------------|----------------------------------|
| Contexts | Child–God consciousness | Processes | Avoidance |
| | Child–people consciousness | | Sidetracking |
| Conditions | Child–world consciousness | | 'Third-personising' |
| | Child–self consciousness | | Sliding between contexts |
| | Religious language | | Forcing a conclusion |
| | Language about beliefs, including beliefs about death | | Magnification |
| | Autobiographical language | | Self-identification |
| | Language of fiction | | Interiorising |
| | Language of play and games | | Forgetting |
| | Language about time and place | | Changefulness |
| | Language about values and morals | Consequences | Calmness and peacefulness |
| | Language of science and technology | | Holiness |
| Strategies | Language of the natural world | | Goodness |
| | <i>Explicit</i> | | Oneness |
| | Mental/physical withdrawal | | Impressed |
| | Focusing, concentration | | Wonder |
| | Seeking relation or dialogue | | Quest for understanding |
| | Seeking/exploiting | | New clarity |
| | aesthetic/stimulation | | Sense of worth |
| | 'Philosophising' | | Thankfulness |
| | <i>Implicit</i> | | Strangeness |
| | Meandering questions, puzzling | | Perplexed and frustrated |
| | Imagining | | Inner conflict |
| | Reasoning | | Embarrassed |
| | Searching for meaning | | Ridiculed |
| | Moralising | | Undermined |
| | Staying with a mood | | Search for supportive comparison |
| | Dreaming | | |
| | Playing, escaping reality | | |
| | Concrete/abstract combining | | |

(Source: Hay & Nye, 2006, p. 114)

Hyde's (2008a, 2008c) study was also qualitative and used Nye's (1998) categories of spiritual sensitivity as a theoretical starting point. In this case the subjects were drawn from three Catholic primary schools, with the meetings explicitly structured around Nye's three categories, utilising a combination of activities, discussion and writing. From this process, four themes were identified:

1. felt sense – “the intensity and immediacy of awareness of the present moment” (p. 120)
2. integrating awareness – utilising different levels of awareness simultaneously
3. weaving the threads of meaning – creating uniquely personalised meaning from a mixture of internalised meaning and externally perceived meaning
4. spiritual questing – “[I'd wish] that the poor become richer, well, not rich, but average ... so they don't have to go around asking for money and that they live a good life” (p. 124).

These themes are more-closely tied to Nye's original theoretical categories than Vialle, Walton and Woodcock's themes. The basis for this may lie in Hyde's deliberate construction of his research practice to utilise the spiritual sensitivity categories as a framework. While Vialle, Walton and Woodcock's research used the same theoretical framework, this was not evident through practice, allowing emerging themes to develop dynamically. In both research studies, however, the findings indicated common qualities of children's spirituality that transcend the non-secular–secular divide.

While Vialle, Walton and Woodcock's conclusions and recommendations are inclusive of all faiths – or absence thereof – the conclusions from Hyde's research are explicitly linked to “nurturing the spirituality of children through the religious education curriculum in Catholic primary schools” (Hyde, 2008c, p. 125). This approach reflects

Hyde's own background as an academic with the Australian Catholic University and is indicative of a wider issue when approaching concepts of children's spirituality. Researchers do not tend to exhibit significant differences in their practical approach to examining children's spirituality, in that the methods are similar even when theoretical orientations differ. The application of methods and utilisation of results, however, tends to be influenced by the academic and personal background of the researchers – whether explicitly religious or nominally secular. (For further discussion of this perspective, see Ch. 3.)

The uniformly qualitative nature of the above studies is indicative of a need to provide a wider quantitative support base for spirituality, to enhance the generalisability of results. The studies of Nye (1998), Hay and Nye (1996), Vialle, Walton and Woodcock (2008) and Hyde (2008c) consistently indicate an underlying commonality of children's approach to experiencing the world. Even with adult-imposed schematic structures of dimensions, themes or categories, that commonality can be identified in both secular and non-secular subjects, so is not predicated on religion, rather, something much more fundamental. The expression of that spirituality, however, is inherently personal, in line with Walton's MSI, as is the presented spiritual identity.

Quantitative data would simultaneously provide a generalisable baseline to expand to a wider population (e.g., gifted) as well as indicators for a more-specific focus (e.g., sex differences among gifted). Exploration of gifted attributes is a small part of that, a keyhole study in relation to humanity as a whole. Given the role of the gifted as providing the higher echelons of ability, regardless of culture, there is an inherent value in understanding how they approach the world. Deeper understanding of the higher levels of spiritual sensitivity in gifted people could be a key to unlocking higher ability in non-gifted students, through active development of spiritual sensitivity

(Lovecky, 1998; Piechowski, 2002, 2003, 2006, 2009; Sisk, 2008). Associated increases in spirituality can contribute to individual and societal well-being (Moritz et al., 2006; Nash, 2009; Saucier & Skrzypińska, 2006), suggesting that consideration of student spirituality when teaching can contribute to holistic development of each child.

2.7 Giftedness and spirituality

Spirituality, as distinct from religious affiliation, is a variable for every human, in that the degree and expression of that spirituality will vary, inclusive of aspects of both light (positive) and dark (negative) (de Souza, 2012). Although a variable, spirituality is also a constant, due to spirituality being present to some degree in everyone, which Hart (2006) used to suggest a revision in how children's responses and interactions are viewed. Spiritual events often provoke an emotional response (Piechowski, 2003), the intensity of which varies in accordance with the internalised conceptions of the individual. For gifted individuals, a greater intensity of experience is typical, which is linked to the complexity of emotional and intellectual contexts (Grant & Piechowski, 1999; Harrison, 2000; Lovecky, 1998; Sisk, 2008), particularly in relation to the difficulties gifted children experience in relating that intensity to the less-intense, at all levels, experiences of their peers (Piechowski, 2002, 2006). Sisk (2008) describes this intensity as "a unique way of perceiving their world and their relationship to it" (p. 24), in line with archetypal concepts (Reynolds & Piirto, 2005). At the same time, intensity has extremes, the expression of which can lead to gifted children being perceived as emotionally unstable (Sword, 2009), rather than emotionally dynamic.

While 'emotional' and 'spiritual' have both come to be accepted as forms of giftedness (Piechowski, 2003), and gifted individuals within all domains are routinely ascribed a higher level of emotional and spiritual functioning (e.g., Lovecky, 1998;

Roeper, 1995; Sisk, 2008), the literature does not differentiate between spirituality across the domains of giftedness. Finnish research with the academically gifted suggests that there are differences in gifted male and female spirituality, with gifted females more inclined to reflect on moral reasoning (Tirri & Pehkonen, 2002) and spend “more time pondering existential questions” (Tamminen, 1991, 1996, cited in Ubani, 2010, p. 3). Gifted boys seem to have more of a focus on their relationship with nature as a “source of spirituality and mystery” (Ubani, 2010, p. 3). However, it is also proposed that higher intellectual ability is neither, in itself, an indicator nor a precursor for higher levels of spiritual sensitivity (Tirri & Pehkonen, 2002). The spirituality of academically gifted boys and girls appears to be qualitatively different, but that does not necessarily equate to higher or lower levels of spirituality for either sex.

While academic giftedness is relatively straightforward to delineate, with its specific ‘achievement’ basis, creativity comes in various forms (Sriraman, 2009), and has had various expressions throughout history, but spirituality lies at its heart. Horan (2011) conceptualised this through his observation that “the relationship between creativity and spirituality is ancient” (p. 371), where intention differentiates intelligence and creativity (Horan, 2007) and “intelligence supports creative endeavor” (p. 193). The field of art is an easily accessible aspect of creativity, where the artwork is an expression of the essence of the artist. Indeed, “artworks ... cannot be devoid of spirituality” (Coleman, 1998, p. xvi).

However, art is the sole province of neither creativity nor spirituality. While there is little research that explicitly links creativity and spirituality, Goodliff (2013) identified an intersect between spirituality and creativity that is evident in even young children, beyond art. Creativity is thus a medium for expression of, and forming a locus for, spirituality and spiritual identity. Creativity of thought was the focus for early

creativity theorists, such as Guilford (1950) and Torrance (1963), a tradition that has since been considerably expanded (e.g., Csikszentmihalyi, 1999; Sternberg & Lubart 1995). As “a learnable skill that leverages common cognitive mechanisms” (Davis et al., 2013, p. 13), creativity allows expression and development of ideas for all individuals. For gifted creatives, that expression and development exist in a social context, where “creativity is inherently interactive” (Davis et al., 2013, p. 21). Although creativity is dependent upon “inner urge, rather than from outer request” (Kharkhurin, 2014, p. 347) and, where the task is ‘rich’, “a key component of creativity is the potential of an idea to trigger further ideas” (Sosa & Dong, 2013, p. 331), it is also value based – as in Gardner’s (1999b) MI theory – being subject to judgement of worth. Judgement of the worth of a creative idea or work thus contributes to the internalisation of self in Walton’s (2010) MSI, with consequent contribution to spiritual identity. There does not appear to be a demarcation in the creativity literature between sexes for spirituality.

Academic and creative giftedness have literature support for the presence of the spiritual but the same cannot be said for sporting giftedness. As an example, Miller (2008) addressed the role of the spiritual in sporting participation, however, while literature on the development of functional sporting prowess is abundant, research connection to the spiritual appears to have been largely ignored. One exception is Ford et al. (2009), who suggested that early engagement in skills and practice play a major role in development of sporting ability, which echoes the sensitive periods for development noted by Brant et al. (2013) and Shavinina (1997). In schools, Moriarty’s (2013) study established the importance of sport participation for children’s spirituality, but lacked a gifted focus. Due to the limited gifted–spiritual literature, it is necessary to look beyond formalised sporting experiences and into the bodily-kinæsthetic

intelligence for a spiritual component. This can be seen most evidently in nature sports (Humberstone, 2011), such as windsurfing, and extreme adventure-based sports, where participants report feelings of euphoric inclusion with nature that transcends the self (Brymer & Gray, 2009, 2010). In such examples, the sporting involvement is participatory rather than being necessarily competitive. Unlike the academically gifted, where nature was noted as a main concern for males, the spirituality of the extreme sportsperson does not seem to be qualitatively different for either sex, reflective of the inherent interconnectedness of nature and spirituality (Suzuki, 2004). The sex duality of the importance of nature was also noted by Hart (2006) as children's "most common catalyst for moments of wonder" (p. 165).

2.7.1 Relating education and intelligence to religion and spirituality

If a distinction is being made between religion and spirituality then a correlate that should be considered is whether that distinction extends into intelligence. Schlehofer, Omoto and Adelman (2008) refer to a survey where a significantly higher percentage of Americans described themselves as spiritual (79%) than religious (64%). Heelas (2012b) suggests that such discrepancies may be due to religious language 'falling out of fashion' and being supplanted by spiritual language. That is, the encumbrances of religion have made it less desirable to be associated with. A greater acceptance of non-religious spirituality also appears to correlate to higher levels of, and better access to, education. This is more evident in affluent nations and the higher classes in less well-off nations (Heelas, 2012a), where "educated women most readily engage with alternative [spiritual] practices" (Glendinning & Bruce, 2012, p. 478).

Perhaps unsurprisingly, research into relationships between religious belief and intelligence can have an atheistic aspect. This is certainly the case for Lynn, Harvey and

Nyborg (2009), whose meta-analysis identified four categories of evidence for a *negative* relationship:

1. Negative correlations between intelligence and religious belief.
2. Lower percentages holding religious beliefs among intelligence elites compared with the general population.
3. A decline of religious belief with age among children and adolescents.
4. Decline in religious belief during the course of the twentieth century as the intelligence of the population has increased. (p. 12)

Lynn, Harvey and Nyborg also found a significant difference in *g*, with atheists outscoring those with professed religious beliefs by six IQ-equivalent points. However, the authors do not consider the role of cognition in their results, that is, how individuals approach their interactions with the world. In an admittedly simplistic representation of a complex construct, individuals who profess themselves to be atheists tend to be those who have given consideration to a religious perspective and found it wanting, with their atheism based in a denial of the validity of religious thought (Atheist Foundation of Australia, 2014). Atheism is thus an actively informed choice to follow a particular approach to religion, albeit through non-association, and is distinct from being non-religious or a non-believer.

In this context, the thought processes of atheists and religious people can be broadly encapsulated as freedom of thought (atheists; IHEU, 2013) versus limited thought (religious; Goldenberg, 1979) – similar to Heelas and Woodhead's (2005) subjective-life and life-as, respectively. Where an atheist takes a holistic world view, without limitation of context or possibilities, the religious affiliate's world view is limited by the need to filter information to their schemata through the strictures of the

particular religion's credo. Atheism is thus presented as a more intellectually invigorating approach to the world than that offered by religion.

From these perspectives, the, presumed, higher intelligence levels of gifted students would make them more likely to be spiritual than religious. Life is rarely that clear cut, however, and such a generalisation does a disservice to the gifted who are religiously inclined, whether through genetic or environmental factors (Koenig et al., 2005; Newcomb & Svehla, 1937).

2.8 The current study

Overall, the literature is inconclusive as to whether there are differences between type of giftedness for the spirituality of the sexes, at least for academic, creative and sporting giftedness. At the macro level, purely from the literature, there does not appear to be a spirituality factor common to all types of giftedness, so how spirituality manifests may be dependent upon micro influences, which can be informed by a more-compartmental research approach. This can take the form of looking for commonalities and differences in the domains of giftedness.

Winit (2010) suggested that variations among gifted domains may account for qualitative differences in moral reasoning, which is linked to spiritual development (Walker & Reimer, 2006). Before the data can be presented, however, there is a need to address a point of contention. In Walton's MSI (2010), religion would be part of experience and culture, contributing to an individual's spirituality, but the absence of religion would also contribute. As has been noted at various points in this chapter, there is confusion between spirituality and religion, the distinction between which will be discussed in Chapter 3. If the gifted have a more-intense spirituality than the non-gifted then a higher level of spirituality should be evident for all gifted respondents in this

research, however, the acceptance of this aspect of gifted experience is not currently delineated by type of giftedness. The primary purpose of this research is to fill that gap for the academic, creative and sporting domains of giftedness.

Chapter 3: Excising religion

If otherwise gifted individuals stop short of deep, spiritual development, which tends to unite diverse peoples, while adhering to superficial, religious doctrine, which tends to alienate groups from one another, they will be more inclined to support or initiate hateful conflicts with those of other religious beliefs. They will consider outsiders somewhat less human and less worthy of compassion. Conversely, if they find ways to develop deep, inward, spiritual growth and move past the particularities of religious doctrine, they will become more compassionate, altruistic, and universalist in their moral approach to life. They will be more inclined to reach out and help others regardless of superficial differences. (Ambrose, 2009, p. 65)

3.1 Introduction

It is near impossible to hold a general discussion about spirituality without religion being raised as a correlate. The connection is almost reflexive, in a Piagetian sense, where the schema for spirituality is tied to the schema for religion by default, forming a merged schematic entity. This presumptive association has been formed partly by experience, through assimilation of others' views, but also by failing to give consideration to what the two terms actually mean and entail, at the personal level, with consequent failure to accommodate these personal reflections into pre-formed schemata. The inherent dichotomy between religious and spiritual is effectively between collective and individual, with understandings related to collective positioned in a group context, such as religion, and individual being inherently personal. Both contexts link to the development of spiritual identity (Walton, 2010; see Ch. 2).

This chapter will examine instances of embedded bias toward a religious context for spirituality, followed by a discussion of the dissociable traits of religion and spirituality, utilising the lens of the collective/individual dichotomy. The purpose of addressing religion and spirituality in this way is to position spirituality as the focus for

discussion within the thesis, while also positioning religion as an optional component of spiritual identity. The approach adopted in this thesis is that religion is a choice, whereas spirituality is a basic characteristic of all humanity, with varying expression (e.g., Hay & Nye, 2006; James, 1963; Tirri & Quinn, 2010). In itself, of course, such an approach may be indicative of this researcher's bias toward such an interpretation, regardless of personal religiousness.

3.2 Examining bias

In the field of spirituality, bias is usually derived from the author's stated personal religious affiliation and their place of employment or sponsor. Despite authors' stated aims to be objective, there is almost invariably an identifiable bias within their work toward viewing both data and the world from their own religious, or non-religious, context. This may be a natural response to what Piaget defined as schema-based cognitive functioning (Piaget, 1926, 1960, 1971, 1985), where "our assumptions shape our perceptions" (Hart, 2006, p. 174). If we have structured our thought processes to fit with a particular worldview, be it doctrinal or philosophical, then it is inescapable that our perspectives will be subject to the established strictures of that personal worldview, whether conscious or unconscious. In the most fundamental form this can manifest as being unable to see another's point of view or accept the possibility of another belief system having parallel validity. More commonly, however, it is expressed through subtle manifestations of relationships with the world, where there is no conscious complicity in applying bias. The examples of Bellous and Csinos (2009), Hyde (2008b) and Radford (2004) will be used as exemplars of the different degrees to which this bias can manifest.

3.2.1 Example 1: Bellous and Csinos (2009)

Even when bias is relatively benign, it can still be both apparent and restricting. For example, Bellous and Csinos (2009) discuss spiritual styles and their wider application, with the starting point of “our primary assumption about the human condition is that people are spiritual, whether or not they are religious” (p. 213). They go on to discuss case examples from Csinos’ research and put them into context. Part of this includes the comment that “in order for children’s spirituality to flourish, their educational and spiritual communities (whether or not they are religious communities) should intentionally create environments saturated with characteristics of all four [spiritual] styles” (pp. 219–220). Yet, despite claiming inclusivity of the research for both religious and non-religious backgrounds, the research itself was undertaken both in a religious environment and utilising an overtly religious population. Indeed, it was a very specific religious context, with all participants drawn from “three different Christian churches in southern Ontario” (p. 219), thus limiting both denomination and location.

Further, Bellous’ employer was McMaster Divinity College, while Csinos was a PhD student at Union Theological Seminary and Presbyterian School of Christian Education. It thus seems a reasonable assumption that Bellous and Csinos may have faced both internal and external pressures toward a particular set of religious principles. In a similar vein, choice of research population can be restricted by both convenience and practicality. It is uncertain whether the churches from which Csinos selected the research sample (thirteen children in focus groups) were drawn from the same pool where Csinos had “been a staff member in children’s ministry at a number of churches in southern Ontario” (p. 223). While the choice of population may be as simple as pure convenience, that very convenience can be problematic. Definitions of what spirituality is and how it can be expressed can influence the framing of the research through

positioning spirituality within a purely religious context. As a result, generalisations of research findings to secular settings are problematised by the research utilising a completely non-secular population. Religion exists as a whole-life choice and is thus not confined to specifically religious settings (Bellous, 2008); selecting religious subjects from a religious setting thus increases the likelihood of a religious perspective. There is no non-religious context for spirituality given in Csinos' research. Bellous and Csinos' (2009) position is by no means uncommon, and sometimes arises as a result of pragmatic considerations, as in the case of Hyde (2008b).

3.2.2 Example 2: Hyde (2008b)

An author must always be conscious of their audience, which can manifest, and be interpreted, in different ways. For example, whether the author consciously separates religion and spirituality or not, there is a schematic connection made by readers that will position each reader differently, dependent upon the readers' schemata of these constructs.

If it is genuine in its efforts to nurture spirituality, religious education needs to take seriously the present temporal horizon and its multiplicity of meanings. The *spiritual questing* of students, even if lying outside what may once have been considered the objective reality presented by the Christian worldview, is authentic. Religious education then needs to begin with the immediate temporal horizon of students, dialogue with it, and intertwine within it, the potential relevance of the Christian story to the students' own search for authentic ways of being and relating in the world. (Hyde, 2008b, p. 45; original emphasis)

The underlying suggestion here is that, in order to engage non-religious students with Christianity, their own spiritual standpoint should be a starting point for intertwining the Christian perspective. While such an approach would count as *input* in Walton's (2010)

MSI (everything does), there is an inherent element of wanting to change the *self*, the internalised personal spirituality, to fit with a religious value system. The individual students' spirituality and, by extension, all of the influences that have formed the students' spirituality and their extant spiritual identities (*output*), are thus co-opted to fit an externally imposed construct.

The focus of the article the above quote is taken from is on the relationship between spiritual questing and religious education. Appearing in *Religious Education*, the audience for the article would expect a religious connection to the articles, so there is an element of catering to a particular audience, lending itself to Hyde's assertion of purpose, "to suggest some pedagogical implications for nurturing spirituality through the primary religious education curriculum" (Hyde, 2008c, p. 117). However, Hyde's research was undertaken exclusively in Catholic schools (within the system that is also his employer), with no link to secular contexts. In spite of this, extrapolations of findings to the secular were suggested. Hyde recognises the existence of the spiritual and 'questing' outside of "traditional religious devotion" (Hyde, 2008c, p. 118; see also, Adams, Hyde & Woolley, 2008), which is indicative of a pragmatic approach. Non-separation of the constructs of religion and spirituality, however, can lead to over-generalisation.

3.2.3 Example 3: Radford (2004)

While Hyde draws at least some division between the concept of spirituality and religion, others tie spirituality exclusively to religion. Radford (2004) is an example of this, through his arguments for curricular inclusion of scriptural doctrine and explicit direct association between spirituality and religion. In a discussion of options for including spirituality education in UK schools, after presenting his proposals, Radford acknowledges that "I am not sure how far this will address the problem of the spiritual

development of our atheistic pupils” (p. 90). Radford appears to be suggesting that atheists are not inclined toward adequate ‘spiritual development’, as they are a ‘problem’ through being non-religious. Despite this, Radford implicitly ascribes ownership of a God concept to atheists: “The problem is, that to say one believes or does not believe in God is to assume that we know what God is – that there is some shared concept upon which we are all agreed and that forms the basis for our acceptance or denial of his existence” (Radford, 2004, p. 87). This ‘shared concept’ is interpreted by Radford as an acceptance of the concept of divinity by atheists through their active disassociation, that is, it is necessary to know God in order to deny God. In reality, atheism takes many forms (Silver, 2013), and it is restrictive to suggest a single position. Rather than an acceptance of divinity, it would be more accurate to view the ‘shared concept’ as an atheist’s attempt to see another’s point of view through understanding of their conceptual background.

Further, some of Radford’s assumptions and assertions appear counter-intuitive: “There is still a tendency to conflate the spiritual with the personal, emotional, social and moral development of the child ... while failing to address its central quality, that is, our human relationship with God” (Radford, 2004, p. 87). Without consideration of our relation to God there is, by Radford’s definition, nothing spiritual in our personal and emotional expression, nor is there a spiritual quality to our morality/ethics and its social context. By contrast, research suggests that morality/ethics, working in conjunction with spirituality, are significant aspects of gifted development (Ambrose, 2009; Ambrose & Cross, 2009; Paul & Elder, 2009; Piechowski, 2009 – see also Kant, 1966; Yust et al., 2006).

Radford restricts the field of candidates for a spiritual existence, through his styling of God as ‘he’, without caveat, thus precluding the possibility of genuine

spirituality from pantheist (e.g., Levine, 1994), polytheist (e.g., Butler, 2008; Harwood, 1999) or feminist (e.g., Bedenarowski, 2012; Raphael, 2012; Ruether, 2005) perspectives, as these belief systems do not have a male monotheistic deity. Explaining this position as catering for a particular audience, as was the case with Hyde (2008b), appears untenable, as Radford's paper is part of a larger work on 'key debates in education' that is for consumption by and for a multicultural context, inclusive of all degrees of religion and spirituality.

3.2.4 Exemplars summary

The exemplars given are broadly representative of the range of bias, or potential for perceived bias (often dependent upon an individual reader's perception), within spirituality literature in relation to religion, where schema-based assumptions abound or are unintentionally propagated. For example, Heaven and Ciarrochi's (2007) longitudinal research examined how personality development influences later religious values, yet there does not appear to be any recognition of concomitant influences for the non-religious, that is, how personality development influences spiritual development. Nor is there reasoning given for why 'religious values' should be of more importance than 'values', which could be construed as a suggestion that values can only be religious. These observations may be countered by such factors as necessary omission, in that space requirements of the article precluded extended clarification. Equally, it may be as simple as terminology usage, where 'religious beliefs' is intended to refer to the internalisation of values, regardless of type of belief.

The potential for confusion of both intent and purpose, when what is 'religious' and what is 'spiritual' are not comprehensively defined, is significant. Religion cannot encompass all forms of spirituality, which would suggest a need to conceptually separate the two.

3.3 Separate paths?

As should be apparent from the above examples, there are various levels of confusion, as propagated through academia and reflected in society, of what is spiritual and what is religious, with a distinction between the two being contentious at times and obvious at others. For all those who take the view that spirituality and religion are separate entities (e.g., Büssing et al., 2010; Lin, 2006; Saucier & Skrzypińska, 2006; Sisk & Torrance, 2001; Yust et al., 2006) or, at least, non co-dependent (e.g., Bellous & Csinos, 2009; Gardner, F., 2011; Hyde, 2008b; Tacey, 2004; Vaughan, 2002), there are others who express views such as “spirituality is incumbent in religiosity” (Horan, 2011, p. 365). Certainly, there is a common assumption that religion and spirituality both coexist and are co-dependent, but Horan’s sentiment may be better expressed as ‘spirituality *should be* incumbent in religiosity’.

Hardy’s (1965, 1966, 1979) ‘natural theology’ approach “suggests that religious awareness may be a universal property of our nature ‘selected’ by evolution” (Nye, 1998, p. 127; see also Hay, 1994) through emphasising the essentially spiritual nature of humanity, based in biology. This view parallels Lakoff and Johnson’s (1999) ‘embodied mind’ concept, which is distinctly non-religious. Spirituality also has an integrative function, with “early attachment experiences [influencing] later manifestations of spirituality” (Surr, 2011, p. 129). Positive early attachment experiences thus contribute to positive spiritual identity expression, through the influence of genes, environment and experience.

3.3.1 Religion

Defining religion is notoriously difficult, because of its multitude of varieties and expressions (Bruce, 2011; Saucier & Skrzypińska, 2006; Smart, 1992). Rooted in the Latin *religio* (reverence/obligation), religion’s focus is often perceived to be on its

internal concerns and expectations, at least in Western contexts. As it is often cited, Durkheim's (1964) definition is worth consideration:

A religion is a unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden – beliefs and practices which unite into one single moral community called a Church, all those who adhere to them. (p. 47; original emphasis)

It is curious that only the first fourteen words of Durkheim's definition are usually chosen to represent his view. This abbreviated treatment is akin to historical revisionism. Without the remainder of the definition the truncated version may misrepresent Durkheim, for whom "*unite into one single moral community called a Church, all those who adhere to them*" was clearly significant and without which a clear understanding of his position on religion is effectively neutered, given that its omission removes the collective context.

Commonly, religion has its roots in belief and affiliation, with a sub-text of ritual (Sifers, Warren & Jackson, 2012). The context thus becomes a sense of belonging to a community (Durkheim, 1964; Good & Willoughby, 2006; Saucier & Skrzypińska, 2006) – "religiously tethered" (Tan & Wong, 2012, p. 29). As with any community, however, the group's priorities are valued over the individual's, *à la* Durkheim's singularity of Church community. This can lead to adopting choices of others, including which religion to be a member of, on the basis of not wanting to be left out. The choice adopted has potential for both social inclusion and, particularly, social ostracism (Gruter, 1985; Kort, 1986). There is a clear sense of living life through the precepts of the religion, which Heelas and Woodhead (2005) viewed as a 'life-as' approach. Adherents of the life-as approach have a tendency to dissociate spirituality from being their own provenance, in order to align spirituality with religiosity. This process

abrogates spiritual development to a ‘group’, thus removing the individual from responsibility for their own spiritual development. In turn, this enables disavowal of individual responsibility through collective allocation of action to the ‘group mind’. Any subsequent thriving is thus transferred from ‘self’ to ‘group’.

3.3.2 Spirituality

While being subject to the same insecurity of definition as religion (Principe, 1983), spirituality is consistently connected to mindfulness (e.g., Radoń, 2013). However, “spirituality ... is not affiliated with codified religion” (DeBlasio, 2011, p. 146) – “religiously untethered” (Tan & Wong, 2012, p. 29) – although Kwilecki (2000) likened spiritual intelligence to the application of individualised religion. Spirituality has its roots in the individual, through personal thought and life expressions – “a subjective experience of the sacred” (Vaughan, 1991, p. 105) – that *potentially* include the religious (Saucier & Skrzypińska, 2006; Sifers, Warren & Jackson, 2012). A spiritually grounded individual has a clear sense of self and their place in the world. Heelas and Woodhead (2005) viewed this as a ‘subjective-life’, where interactions beyond the individual are framed in relation to the individual, a position that is supported by the research of Glendinning and Bruce (2012). Adherents of the subjective-life approach take ownership of their spirituality as an individual choice and responsibility, but are not precluded from a community and/or religious context. The group mind has a parallel in the ‘collective mind’, where individual consciousnesses form an entity that offers more depth than its individual components. Rooted in the Latin *spiritus* (breath), spirituality is both what vitalises the individual and nourishes the interactions of humanity.

3.4 Meeting of the ways

It is near impossible to raise the topic of spirituality, in any context, without religion being associated, but that does not need to be the case. In the debate over the validity/legitimacy of spiritual intelligence, religion plays a central role. This is evident even through Gardner's justification of his disavowal of 'spiritual', in favour of 'existential', when giving a name to the intelligence, being partly grounded in his belief that spiritual was too closely associated with 'religious', which "makes me uncomfortable" (Gardner, 2006, p. 20). Compounding the issue, the bulk of 'spiritual' research and associated measures have a religious focus and/or reasoning (Sifers, Warren & Jackson, 2012 – e.g., Heaven & Ciarrochi, 2007).

In Heelas and Woodhead's (2005) discussion of why spirituality is subjugating religion, they note that "one of the great virtues of 'life-as' and 'subjective-life' is that it enables us to sharpen up the distinction between life-as religion and subjective-life spirituality" (Heelas & Woodhead, 2005, p. 5). This is presented as though these were hard-and-fast categorisations, but spirituality *may* also be a life-as choice, while religion *may* also be subjective-life. In their research into independent 'dispositions' for tradition-oriented religiousness and subjective spirituality, Saucier and Skrzypińska (2006) observed that, while the two dispositions had a moderate correlation for independence, personality attributes associated with each could be found in both the religious and non-religious. This may be reflective of how the domains of religion and spirituality overlap (Tirri & Quinn, 2010).

In noting the totality of conviction necessary for religious devotion, James (1963) recognised that any approach to life that was composed of a "total reaction upon life" (p. 35) – "a way of living life itself" (Simmel, 2012, p. 284) – could be considered religious. On this basis, whole-of-life approaches such as vegetarianism (e.g.,

Dyczewska, 2012), environmentalism (e.g., Kashima, Paladino & Margetts, 2014) and altruism (e.g., Fehr & Fischbacher, 2003; Warneken & Tomasello, 2009), all of which are grounded in the connectedness of being and allow the adherent to transcend through a higher purpose, could be classified as religious. Albert Einstein (1935, 2010), who Gardner connected to “existential excellence” (Sisk & Torrance, 2001, p. 6), acknowledged the depth of conviction of his own religious beliefs, in the process extending the view of what qualifies as religious:

A knowledge of the existence of something we cannot penetrate, of the manifestations of the profoundest reason and the most radiant beauty, which are only accessible to our reason in their most elementary forms – it is this knowledge and this emotion that constitute the truly religious attitude; in this sense, and in this sense alone, I am a deeply religious man. (Einstein, 1935, p. 5)

With these words, Einstein positioned himself as being simultaneously non-religious and religious – non-religious through an elaborate contra-indication of religiousness, yet religious through a clearly defined statement of value. In so doing, consciously or otherwise, he also positioned the justification as both singular and collective, through individual positioning of context within wider society (the existentialist nature of such reasoning is discussed in Ch. 2).

Approaching life in a subjective pose – with implications *for* and requirements *of* self – does not preclude considerations of how that ‘self’ fits with, or is constructed in the context of, wider contexts, inclusive of other individuals and organisational structures. Indeed, subjective-life can only have relevance when viewed or perceived within the societal reference context. ‘Humanity’ is a pluralism, so consideration of ‘self’ is done as a component of that plurality (Sartre, 1957, 1967). Even if an individual

was the only human on Earth, perception would still exist as part of a pluralism – within the plurality of known existence.

Rather than religion providing the key to accessing spiritual expression, James (1963; Rydenfelt & Pihlström, 2013) positions religion, in any form, as a conduit for expressing personal spirituality through life practice, in line with Gardner (F., 2011). Religion is thus a tool that *may* be utilised to further spirituality, whether life-as or subjective-life. Spirituality can be a component of religion, but it does not naturally follow that religious belief should be a prerequisite for a spiritual life. Equally, religion is not by default spiritual (Hay & Nye, 2006), rather, spirituality transcends religion (Sinetar, 2000), as it is the spiritual dimension that is a necessity for human existence (Büssing et al., 2010; Van Ness, 2012).

3.5 A causal relationship for confusion

Religion *is* the confusing factor in spirituality discussions; once it is stripped away then the commonalities of spirituality, and its scope, can become apparent. Attempts to annex spirituality to serve the needs of doctrinal religion are in opposition to serving the spiritual needs of the religion's congregation. In applying an adult-centric religious doctrine to children, there is both an assumption that it is 'best' for the children and apparent disregard of what children's perspectives have to offer: "can we be as willing to let what we learn from children change *our* theology and theory as we are willing to change children by the imposition of our theology and theory on them" (Hart, 2006, p. 175; original emphasis).

Children are active agents and co-constructors of their own reality, with coherent functioning within that sphere, yet they are framed by adults as social actors in need of a director (Hyde, Yust & Ota, 2010a). The motivations for behaviours can be

manipulated at an early age – a grounding principle of behaviourist theory. For both spirituality and religion, there is a fine balance between facilitating a child's agency through providing 'direction' and imposing external expectations and standards, which *may* be 'misdirection'. Misdirection through doctrinal religion can potentially result in negative behaviours, where "surface-level religious beliefs can lead to both good and evil action while deeper spirituality, where the altruistic commonalities reside, more often leads to positive, moral effects" (Ambrose & Cross, 2009, p. 6). This is not to suggest that spirituality can only be 'deep and meaningful' and purely positive, which is certainly not the case. Rather, that the more-positive aspects of religious adherence arise from the spiritual rather than the religious component. Paul and Elder (2009) took this a step further through their assertion that the spiritual context for humanity and ethics should take precedence over religious doctrine in order to develop deeper spirituality. In specific relation to children, their spirituality "tends toward the immanent and existential" (Hart, 2006, p. 174), however, it is also "hidden because of a culturally constructed forgetfulness which allows us to ignore the obvious" (Hay & Nye, 2006, p. 9). Hay and Nye position this 'forgetfulness' as the provenance of adults, who are conditioned to 'rise above' thinking like a child and 'grow up'. The suggestion appears to be that adults have been conditioned to 'leave behind' the views of childhood, to 'forget' them, in order to progress into more-developed, socially acceptable thinking. Yet many adults long for the 'simpler' times of their childhood.

There is a constant need to be aware of a separation of religion and spirituality – in the process, excising religion from spirituality discussions, to the benefit of both. This chapter's purpose was to position spirituality as the focus for discussion within the thesis. Rather than religion being a pre-determinant for spirituality, the process of

establishing religion's dependent relationship to spirituality has allowed the literature to focus on backgrounding the relevance of the research undertaken.

Chapter 4: Method

Leadership ability without ethics leads to manipulation and corruption; leadership ability with ethics leads to service to humanity. In preparing gifted students to assume leadership positions in society, we must keep in mind the importance of their ethical development. Popularity is not enough. (Silverman, 1993, p. 312)

4.1 Research aim

As there is no extant research that connects spirituality to different types of giftedness, the overall aim of this research was to establish a baseline for future research by investigating the levels of spirituality across cohorts characterised by different types of giftedness. Specifically, the current study aimed to address two research questions:

1. *Do students' spirituality levels vary as a function of sex and type of giftedness?* This question sought to examine if there were effects of type of giftedness and participants' sex on self-rated spirituality levels, to identify whether such differences exist and in what form. The literature is inconclusive about whether qualitative differences for spirituality between sexes (Tirri & Ubani, 2004; Ubani, 2010) translate to quantitative differences, which remains to be established here. Given Horan's (2007, 2011) observations that creativity and spirituality are intimately connected, it was expected that creative gifted students, both male and female, would have the highest self-reported levels of spirituality. Further, in light of authors such as Piechowski (2002, 2003, 2006, 2009) highlighting the more-intense spirituality of gifted students, as compared to non-gifted, it was hypothesised that all gifted groups, of both sexes, would have higher self-reported levels of spirituality than the non-gifted control group. These insights have the potential to inform targeted development of spiritual understandings in curricula and associated interventions.

2. *Do students' spirituality levels vary as a function of spiritual domain?*

Following Winit's (2010) suggestion of qualitative differences between gifted domains, the purpose of this question was twofold: 1) to map domain-specific levels of spirituality for each giftedness group; and, 2) identify any differences in spiritual profiles across the groups. From Horan's (2007, 2011) reasoning, as above, it was expected that creatively gifted students would have higher levels of spirituality across all domains. Also, given claims of higher levels of spirituality for the gifted (e.g., Lovecky, 1998; Piechowski, 2002, 2003, 2006, 2009; Roeper, 1995; Sisk, 2008) over the non-gifted, it was also expected that the gifted groups would be largely consistent in their self-reported levels of spirituality across domains.

4.2 Design

This research adopted a causal-comparative quantitative design, as it investigated differences between naturally occurring groups, examined using a survey. Given that there was no comparable research to extend upon, an exploratory descriptive approach was also taken (mapping students' self-reported levels of spirituality across domains) to establish a baseline for further study. Survey-based research was selected for generalisability (Brown & Dowling, 1998; Fink, 2009; Fowler, 2009; Kervin et al., 2006; Nardi, 2006; Punch, 2003), as a method to gather data from a large number of respondents across different specialised schools for gifted students in geographically dispersed locations. Using a cross-sectional survey approach further allowed the researcher to assess the anonymous participants' views at a given point in time (Creswell, 2012; Mertens, 2010; O'Toole & Beckett, 2013), while also yielding data that permitted comparisons across giftedness types and sex. Lastly, survey-based data collection also allowed a broad range of questions to be addressed in an efficient manner. Although survey-based data is limited by its subjective self-report nature,

measures were taken to ensure the validity and reliability of the data collection (see section 4.5).

4.3 Site

The three schools used in this research were situated in a large regional area of Australia, and were chosen based on a combination of their accessibility and presence of easily identifiable gifted student populations. The individual specialities of the schools also related to different elements of Gardner's (1993) MI theory. School A, as academic, emphasised logical-mathematical and linguistic intelligences; School C, as creative, broadly emphasised a combination of musical, spatial and interpersonal intelligences; while School S emphasised bodily-kinæsthetic intelligence.

School A is a selective high school, ranked in the top 50 high schools in the NSW 2013 HSC rankings (out of 660). In New South Wales, selective high schools are composed entirely of academically gifted and talented students, providing "intellectual stimulation by grouping together gifted and talented students who may otherwise be isolated from a suitable peer group" (Department of Education and Communities, NSW, 2014b). Placement is competitive and students are selected based on their performance in the Selective High School Placement Test, administered by each selective high school, which has a linguistic and logical-mathematical emphasis. School A draws from a wide socio-economic and geographic region that is weighted toward the middle and upper classes.

School C is a creative and performing arts high school, ranked in the top 200 high schools in the NSW 2013 HSC rankings (out of 660). In New South Wales, creative and performing arts high schools are composed of a combination of general-entry students and auditioned students, with specialist streaming for the successful

auditioned students. They “provide opportunities for students to pursue excellence within the Creative and Performing Arts while studying the core curriculum prescribed by the Board of Studies” (Department of Education and Communities, NSW, 2014a). The range of creative and performing arts offered vary between schools; dance and drama tend to be standard, with other options such as music, vocal and circus also offered. School C draws its auditioned student population ($\approx 40\%$) from a wide socio-economic and geographic area. General entry placement ($\approx 60\%$) – primarily for students within the school’s catchment area – is still highly sought after, with academic results above state average. The ratio of female to male students is higher than typical in non-creative and performing arts high schools.

School S is a sports high school, ranked in the bottom 150 high schools in the NSW 2013 HSC rankings (out of 660). In New South Wales, sports high schools are composed of a combination of general-entry students and TSDP (Talented Sports and Development Program) students and provide “opportunities for students who have potential to reach elite athletic levels” (Department of Education and Communities, NSW, 2014c). TSDP placement is competitive and students are selected based on their assessed performance/knowledge in their specified sport. School S potentially draws its TSDP student population ($\approx 30\%$) from a wide socio-economic and geographic area – while a significant proportion of TSDP students are from the local area, others are drawn from further locales. General entry placement ($\approx 70\%$) has a more-limited demographic, being drawn almost exclusively from the low-SES (socio-economic status) area in which the school is situated. School S has significant behavioural challenges among its student population, both TSDP and non-TSDP. The ratio of female to male students is lower than typical in non-sport high schools.

4.4 Participants

All 352 participants were solely drawn from years 11 and 12. Gifted participants were identified from the target population using convenience sampling (Creswell, 2012), in that all three schools were easily accessible to the researcher. The control group was drawn from the non-TSDP population of School S. All three schools can be considered to cater for giftedness due to their acceptance procedures: School A requires all students to pass a formal, academically selective test for entry; School C includes $\approx 60\%$ population who have satisfactorily completed an audition process for entry – only auditioned students participated in the study; School S has a TSDP, with set criteria to be attained before acceptance into the program ($\approx 30\%$), dependent upon discipline – only TSDP students participated in the gifted study, with the control group drawn from the remaining $\approx 70\%$. The resulting sample consisted of 352 students with an average age of 16.43 years ($SD = 0.67$), 54% of whom were female. The sample was divided into four naturally occurring groups: School A ($N = 186$, $M_{\text{age}} = 16.37$ years, $SD = 0.66$, 52% female); School C ($N = 83$, $M_{\text{age}} = 16.49$ years, $SD = 0.76$, 65% female); School S ($N = 34$, $M_{\text{age}} = 16.40$, $SD = 0.56$, 29% female); and Control ($N = 49$, $M_{\text{age}} = 16.43$, $SD = 0.67$, 59% female).

4.5 Instrument

Quantification of the relationship between spirituality and giftedness is problematic. At the time of this research, there was no extant instrument that had been specifically designed for assessing the spirituality of gifted children or adolescents. Equally, no satisfactory, standardised instrument existed for the measurement of spirituality within the mainstream population of children or adolescents, although this deficit has been at least partly addressed (Stoyles et al., 2012). Short of developing an adolescent-centred

spirituality scale from first principles – that is, researching, designing and piloting a new adolescent-centred spirituality scale – the lack of appropriate instrumentation made it necessary to adapt an adult-centric scale.

The Integrated Spiritual Intelligence Scale (ISIS), developed by Amram and Dryer (2008; see Appendix 1), was adopted for these purposes because it offers both depth and breadth of statements. Building on Amram (2007), the 83-item ISIS scale features statements that are grouped into five spirituality domains and 22 capability sub-scales (see Table 4.1), which share significant features with the themes identified in Amram's (2007) qualitative research. Statements for each of the sub-scales are spread throughout ISIS, obviating any chance of the order influencing sub-scale and domain response. Further, the ISIS scale was developed to yield a measurement of overall spirituality levels, as well as levels of spirituality within each of five spirituality domains. Each of the statements is non-prescriptive, in that they are not phrased to encourage a particular direction for the response through either tenor or wording (Nardi, 2006). Further, the six-point Likert response scale permits standardisation in administration and scoring (Mertens, 2010). A limited amount of amendment to the original scale was necessary, however, to ensure age-appropriateness for adolescents. All amendments were checked and approved by the original creators of ISIS, Amram and Dryer. Apart from courtesy and copyright, this approval was sought as an assurance that the original intent of the statements was retained. The ISIS version given to the students was renamed the Life Perceptions scale, also with the approval of the authors, in order to be less leading for responses, as the word 'spiritual' in the title had the potential to be. The final adapted scale can be found in Appendix 2.

Table 4.1: ISIS domains and sub-scales

| <i>Consciousness</i> | <i>Grace</i> | <i>Meaning</i> | <i>Transcendence</i> | <i>Truth</i> |
|----------------------|--------------|----------------|----------------------|-----------------|
| Intuition | Beauty | Purpose | Higher-self | Egolessness |
| Mindfulness | Discernment | Service | Holism | Equanimity |
| Synthesis | Freedom | | Practice | Inner-wholeness |
| | Gratitude | | Relatedness | Openness |
| | Immanence | | Sacredness | Presence |
| | Joy | | | Trust |

(Source: Amram & Dryer, 2008)

ISIS was adapted for a younger population for this study, with adjustments made to the terminology in order to allow respondents to access the meaning in the statement items. For example, as the original ISIS was designed for an adult audience, all ‘work’-related references could not be transferred. Work-related terminology was adjusted to reflect evaluations of school or life, for example: statement 1 – ‘I notice and appreciate the beauty that is uncovered in my work’ became ‘I notice and appreciate the beauty that is uncovered in the things I do’; statement 73 – ‘I see advancing my career as the main reason to do a good job’ became ‘The main reason to perform well in school is to advance my future career options’. In other instances, it was the complexity of the language used that needed to be simplified, for example: statement 8 – ‘In my daily life, I feel the source of life immanent and present within the physical world’ became ‘In my daily life, I feel the source of life to be inherently divine and present within the physical world’. In addition, separate clarification was given at the start of the survey form for the following terms: ‘opening myself’, ‘nonconformity’, ‘cyclical’, ‘linear’, ‘sacred’, ‘sensual’, ‘holistic’ and ‘paradoxes’. These clarifications contributed to addressing any issues of unfamiliarity for respondents (Tourangeau, Rips & Rasinski, 2000).

The original ISIS scale scored well on all aspects of validity (Amram & Dryer, 2008). This can be seen through a high internal consistency score (Cronbach’s Alpha = 0.97), high internal consistency of domain scales (range = 0.84–0.95; mean value = 0.89) and moderate to high internal consistency for the sub-scales (range = 0.62–0.88;

mean value = 0.75). Of the 22 sub-scales, only Egolessness (0.62; Truth) and Relatedness (0.68; Transcendence) had an internal consistency below .70. Convergent validity was also established by correlating ISIS with the Index of Core Spiritual Experiences (INSPIRIT) and Satisfaction With Life Scale (SWLS). INSPIRIT and ISIS scores had a high correlation ($r = 0.73, p < .001$), as did ISIS and SWLS scores ($r = 0.73, p < .001$). There was a high correlation between INSPIRIT and the Transcendence subscale ($r = 0.85, p < 0.01$), but only moderate correlation with the Truth subscale ($r = 0.37, p < 0.01$). As a pre-existing instrument was used (ISIS), with limited amendments, the validity and reliability of responses were assumed on the basis of this reliability and validity evidence (Creswell, 2012). Further, that 25 items are reverse-scored meant that validity of the data generated could be evaluated on the basis of current data.

4.6 Procedure

The three schools participating in this research were chosen based on a combination of their accessibility and presence of easily identifiable gifted student populations. Initial contact was made with the respective principals to gauge their interest, discuss the proposed research, view the research instrument and raise any queries/concerns. The research was subsequently approved by the University of Wollongong Human Research Ethics Committee in November 2010 and SERAP (New South Wales Department of Education and Training) in August 2011, with data collection taking place in March 2012 (School A and School C) and May 2012 (School S) – see Appendix 3 for a sample Participant Information Sheet. No adverse effects were expected for the participants, however, in the unlikely event of a student feeling distressed as a result of completing the survey, arrangements were made with all three schools for the school counsellor to

be available at the time of administration. In accordance with ethics approval, tacit consent was provided by completion of the Life Perceptions scale.

Survey administration took place in the schools – School A in a lecture hall, School C and School S in students’ regular classrooms, on a class-by-class basis – supervised by the researcher and, for School A only, an assistant. In each case, the students were given some background to the research and an opportunity to ask any questions. On average, survey completion took approximately 15 minutes.

4.7 Data analysis

To investigate students’ overall spirituality scores, and whether these varied as a function of giftedness type and sex, descriptive analyses and ANOVAs were conducted. Subsequent analyses applied these same procedures to spirituality domain scores and sub-scale scores to identify any differences in spirituality profiles as a function of giftedness group. The results of these analyses are presented in Chapter 5.

4.8 Conclusion

The methodological foundation given in this chapter provided a solid framework for the research through, for example, using an established scale, contributing to validity and reliability of data, and a large sample size, for better generalisability. Results will be presented in Chapter 5, while discussion of the results and their relation to the research questions and hypotheses will be presented in Chapter 6.

Chapter 5: Results

An action from duty does *not* have its moral worth *in the purpose* which is to be attained by it, but in the maxim according to which it has been formed. (Kant, 1966, p. 200; original emphasis)

5.1 Introduction

This chapter presents the results of the research. Preliminary analyses will be discussed that affected the sample size and structure of the groups. Subsequent to this, scores for overall spirituality are presented followed by analysis of differences in spirituality scores as a function of group and sex. Differences as a function of group are then further explored to conclude this chapter.

5.2 Analyses

As a preliminary to the main analyses, an investigation was undertaken to establish if there were significant differences between the sport and control groups. Two factors contributed to an expectation of limited difference between the responses of the sport and control groups: 1) lack of literature support for the spiritual as an attribute of sporting giftedness; and 2) both groups were drawn from School S. To evaluate this expectation, independent-samples t-tests were conducted to compare the sport and control groups on full-scale, domain and sub-scale spirituality scores. Results indicated no statistically significant differences between the two groups on full-scale spirituality scores, scores for each spirituality domain or sub-scale scores (all $ps > .05$, with the exception of the Practice sub-scale, $p = .03$). The lack of significant differences between the two groups justified collapsing them as a single control group for the purposes of

subsequent analyses. This also served to more closely align the sample sizes of the giftedness groups (i.e., academic, creative, control).

5.3 Overall spirituality scores

An initial ANOVA was conducted to investigate differences in overall spirituality scores as a function of giftedness group (see Fig. 5.1). Results indicated a main effect of Group, $F(2, 352) = 7.05, p = .001$, partial $\eta^2 = .04$, such that the Creative group had the highest overall spirituality scores ($M = 296.33, SD = 38.36$), followed by Academic ($M = 281.22, SD = 43.48$) and then Control ($M = 268.93, SD = 48.09$). Consistent with expectations, the Creative group scored highest on overall spirituality. Further, as predicted, the academic group also had significantly higher overall spirituality scores than the control group.

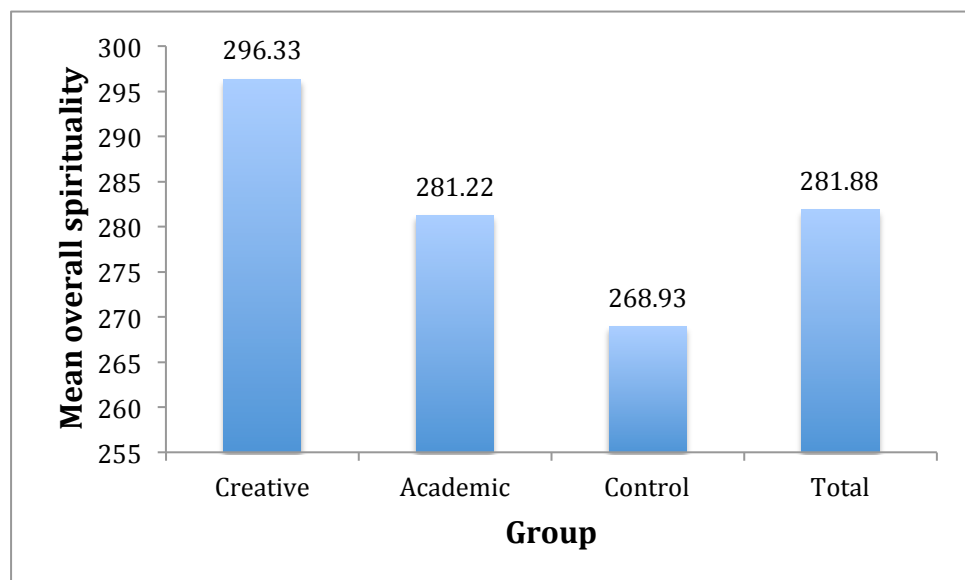


Figure 5.1: Overall spirituality means for Group

5.4 Interaction between Group and Sex in spirituality scores

A subsequent 2 (Sex) x 3 (Group) ANOVA was conducted on participants' total spirituality scores to investigate a possible group by sex interaction. Results again indicated a significant effect of Group, $F(2, 352) = 7.05, p = .001$, partial $\eta^2 = .04$ (as presented in the preceding section). There was, however, no significant effect of Sex, $F(1, 352) = 0.64, p = .425$, partial $\eta^2 < .01$. These results were conditioned by a significant Sex x Group interaction, $F(2, 352) = 4.00, p = .019$, partial $\eta^2 = .02$. Post-hoc analyses indicated no significant difference in males' spirituality scores across giftedness groups, yet significant differences in females' spirituality scores across giftedness groups (see Fig. 5.2): Creative–Academic, $t(149) = 3.11, p = .002, \eta^2 = .06$; Creative–Control, $t(91) = 4.31, p < .001, \eta^2 = .17$; Academic–Control, $t(134) = 2.32, p = .022, \eta^2 = .04$. Specifically, females' scores were highest in the Creative group ($M = 301.81, SD = 38.36$), followed by the Academic group ($M = 279.02, SD = 45.53$) and then the Control group ($M = 256.66, SD = 62.39$). Taken together, this suggests commonality among males in capacity for spirituality, while females' capacity for spirituality was more divergent, dependent primarily upon their 'type' of giftedness.

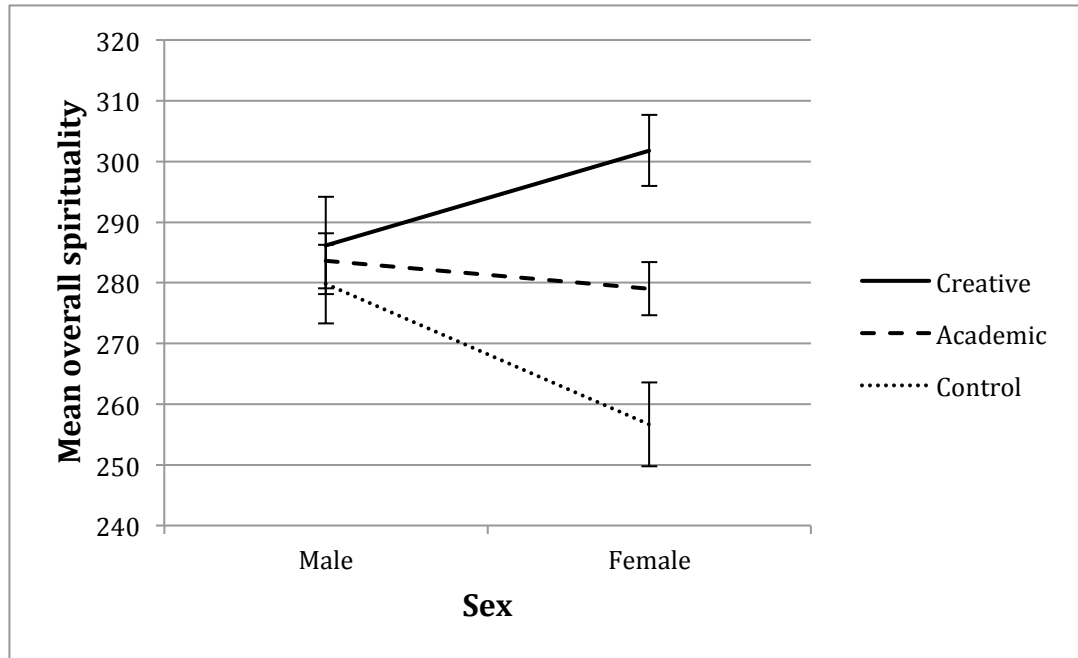


Figure 5.2: Overall spirituality means for Sex and Group

5.5 Spirituality domain and sub-scale scores by group

Descriptive statistics for spirituality domain scores are provided in tables 5.1–5.5. In order to investigate whether domain-specific spirituality scores differed as a function of giftedness group (i.e., Creative, Academic, Control), a 3 (Group) x 5 (Domain) repeated-measures ANOVA was conducted on participants' spirituality domain scores. Mean scores (as opposed to sum scores) were used in recognition of the different number of items within each domain. Results indicated a significant effect of Group, $F(2, 350) = 10.14, p < .001$, partial $\eta^2 = .06$. Post-hoc REGWQ analyses indicated that all groups significantly differed in their spirituality scores, with the Creative group scoring highest ($M = 3.57, SD = 0.46$), followed by the Academic group ($M = 3.40, SD = 0.54$) and then the Control group ($M = 3.24, SD = 0.58$). There was also a significant effect of Domain, $F(4, 1400) = 77.29, p < .001$, partial $\eta^2 = .18$. Post-hoc pairwise comparisons indicated significant differences between all domains, with Consciousness scores highest ($M = 3.81, SD = 0.82$), followed by Grace scores ($M = 3.74, SD = 0.69$),

Truth scores ($M = 3.43$, $SD = 0.66$), Meaning scores ($M = 3.21$, $SD = 0.77$) and then Transcendence scores ($M = 3.08$, $SD = 0.89$).

Table 5.1: Descriptive statistics for Consciousness domain

| Domain/subgroup | Q# | Academic | | Groups Creative | | Control | | Total | |
|----------------------|----|-------------|-------------|--------------------|-------------|-------------|-------------|-------------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Consciousness | | 3.85 | 0.75 | 4.17 | 0.61 | 3.37 | 0.94 | 3.81 | 0.82 |
| <i>Intuition</i> | | 3.75 | 0.99 | 4.41 | 0.75 | 3.67 | 1.00 | 3.86 | 1.00 |
| | 12 | 2.85 | 1.78 | 4.05 | 1.58 | 3.58 | 1.61 | 3.31 | 1.76 |
| | 43 | 3.80 | 1.51 | 4.02 | 1.41 | 3.40 | 1.68 | 3.76 | 1.54 |
| | 50 | 4.15 | 1.36 | 4.94 | 1.09 | 3.92 | 1.53 | 4.29 | 1.39 |
| | 51 | 4.17 | 1.20 | 4.69 | 1.08 | 3.78 | 1.53 | 4.20 | 1.29 |
| <i>Mindfulness</i> | | 4.03 | 0.79 | 4.11 | 0.76 | 3.62 | 0.86 | 3.93 | 0.83 |
| | 4 | 4.81 | 1.01 | 4.86 | 1.09 | 4.72 | 1.40 | 4.80 | 1.13 |
| | 16 | 4.25 | 1.48 | 4.41 | 1.38 | 3.63 | 1.58 | 4.15 | 1.50 |
| | 29 | 3.41 | 1.49 | 3.39 | 1.46 | 3.15 | 1.52 | 3.35 | 1.49 |
| | 54 | 3.41 | 1.34 | 3.58 | 1.30 | 2.86 | 1.55 | 3.33 | 1.40 |
| | 72 | 4.36 | 1.40 | 4.39 | 1.43 | 3.47 | 1.48 | 4.17 | 1.47 |
| <i>Synthesis</i> | | 3.84 | 1.03 | 3.96 | 0.89 | 3.33 | 1.11 | 3.70 | 1.07 |
| | 36 | 4.01 | 1.49 | 3.96 | 1.19 | 3.27 | 1.40 | 3.83 | 1.43 |
| | 49 | 3.92 | 1.40 | 4.29 | 1.27 | 3.10 | 1.40 | 3.82 | 1.43 |
| | 70 | 3.64 | 1.38 | 3.63 | 1.34 | 3.49 | 1.51 | 3.60 | 1.40 |

Table 5.2: Descriptive statistics for Grace domain

| Domain/subgroup | Q# | Academic | | Groups Creative | | Control | | Total | |
|--------------------|-----------|-------------|-------------|--------------------|-------------|-------------|-------------|-------------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Grace | | 3.81 | 0.65 | 3.91 | 0.61 | 3.41 | 0.74 | 3.74 | 0.69 |
| <i>Beauty</i> | | 3.75 | 1.10 | 4.29 | 0.88 | 3.44 | 1.06 | 3.77 | 1.10 |
| | 1 | 3.77 | 1.26 | 3.91 | 1.06 | 3.61 | 1.44 | 3.77 | 1.26 |
| | 47 | 3.75 | 1.45 | 4.13 | 1.27 | 3.29 | 1.53 | 3.73 | 1.45 |
| | 62 | 3.80 | 1.59 | 4.74 | 1.43 | 3.40 | 1.55 | 3.94 | 1.61 |
| <i>Discernment</i> | | 3.80 | 0.91 | 3.86 | 0.81 | 3.54 | 0.88 | 3.76 | 0.88 |
| | 28 | 4.55 | 1.16 | 4.3 | 1.20 | 3.75 | 1.61 | 4.31 | 1.32 |
| | 42 | 3.07 | 1.60 | 3.36 | 1.58 | 3.16 | 1.62 | 3.16 | 1.60 |
| | 45 | 3.68 | 1.48 | 4.10 | 1.43 | 3.70 | 1.41 | 3.78 | 1.46 |
| <i>Freedom</i> | 79 | 3.98 | 1.56 | 3.62 | 1.33 | 3.61 | 1.63 | 3.81 | 1.53 |
| | | 4.22 | 0.87 | 3.88 | 0.96 | 3.73 | 0.90 | 4.03 | 0.92 |
| | 6 | 4.63 | 1.17 | 4.41 | 1.19 | 3.59 | 1.38 | 4.35 | 1.29 |
| | 31 | 3.86 | 1.51 | 3.45 | 1.67 | 3.90 | 1.40 | 3.77 | 1.53 |
| <i>Gratitude</i> | 44 | 4.18 | 1.44 | 3.71 | 1.66 | 3.60 | 1.58 | 3.93 | 1.55 |
| | | 4.04 | 1.24 | 4.19 | 1.27 | 3.72 | 1.18 | 3.96 | 1.23 |
| | 24 | 4.16 | 1.28 | 4.27 | 1.37 | 3.89 | 1.46 | 4.12 | 1.35 |
| | 67 | 3.94 | 1.47 | 4.13 | 1.43 | 3.49 | 1.58 | 3.88 | 1.50 |
| <i>Immanence</i> | | 3.63 | 0.91 | 3.94 | 0.85 | 3.60 | 0.82 | 3.69 | 0.89 |
| | 13 | 3.99 | 1.33 | 4.10 | 1.07 | 3.85 | 1.33 | 3.99 | 1.27 |
| | 21 | 4.17 | 1.45 | 4.46 | 1.42 | 3.93 | 1.54 | 4.18 | 1.47 |
| | 27 | 2.99 | 1.43 | 3.20 | 1.46 | 2.84 | 1.45 | 3.01 | 1.45 |
| <i>Joy</i> | 52 | 3.39 | 1.45 | 3.99 | 1.47 | 3.72 | 1.62 | 3.61 | 1.51 |
| | | 3.79 | 1.03 | 3.68 | 0.98 | 3.51 | 0.89 | 3.65 | 1.02 |
| | 76 | 4.07 | 1.72 | 3.29 | 1.61 | 3.75 | 1.57 | 3.81 | 1.69 |
| | 77 | 3.43 | 1.47 | 3.22 | 1.41 | 3.12 | 1.58 | 3.31 | 1.48 |
| | 80 | 3.83 | 1.35 | 4.48 | 1.31 | 3.75 | 1.62 | 3.97 | 1.43 |

NB: Question numbers in bold were reverse scored.

Table 5.3: Descriptive statistics for Meaning domain

| Domain/subgroup | Q# | Academic | | Groups Creative | | Control | | Total | |
|-----------------|-----------|-------------|-------------|--------------------|-------------|-------------|-------------|-------------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Meaning | | 3.13 | 0.79 | 3.48 | 0.62 | 3.12 | 0.83 | 3.21 | 0.77 |
| <i>Purpose</i> | | 3.15 | 0.76 | 3.28 | 0.63 | 3.31 | 0.70 | 3.21 | 0.72 |
| | 10 | 4.05 | 1.26 | 4.10 | 1.06 | 3.78 | 1.21 | 4.00 | 1.21 |
| | 19 | 2.44 | 1.30 | 3.52 | 1.35 | 2.91 | 1.32 | 2.80 | 1.38 |
| | 39 | 3.50 | 1.57 | 4.10 | 1.39 | 3.61 | 1.49 | 3.67 | 1.53 |
| <i>Service</i> | 73 | 2.28 | 1.42 | 1.89 | 1.36 | 2.83 | 1.59 | 2.31 | 1.48 |
| | 74 | 3.47 | 1.62 | 2.93 | 1.60 | 3.38 | 1.61 | 3.32 | 1.62 |
| | | 3.26 | 1.10 | 3.85 | 0.99 | 3.27 | 1.00 | 3.37 | 1.10 |
| | 38 | 3.40 | 1.51 | 4.22 | 1.19 | 3.19 | 1.30 | 3.55 | 1.44 |
| | 40 | 3.51 | 1.40 | 4.20 | 1.40 | 3.30 | 1.58 | 3.63 | 1.48 |
| | 71 | 2.82 | 1.47 | 3.17 | 1.44 | 3.27 | 1.38 | 3.00 | 1.45 |

NB: Question numbers in bold were reverse scored.

Table 5.4: Descriptive statistics for Transcendence domain

| Domain/subgroup | Q# | Academic | | Groups Creative | | Control | | Total | |
|----------------------|-----------|-------------|-------------|--------------------|-------------|-------------|-------------|-------------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Transcendence | | 2.98 | 0.92 | 3.42 | 0.78 | 2.99 | 0.86 | 3.08 | 0.89 |
| <i>Higher-self</i> | | 3.14 | 1.19 | 3.54 | 1.00 | 3.39 | 0.69 | 3.28 | 1.07 |
| | 15 | 2.65 | 1.67 | 3.43 | 1.62 | 3.11 | 1.45 | 2.94 | 1.64 |
| | 35 | 2.75 | 1.63 | 3.36 | 1.61 | 3.28 | 1.47 | 3.01 | 1.61 |
| | 53 | 3.63 | 1.54 | 3.51 | 1.40 | 3.87 | 1.65 | 3.66 | 1.53 |
| | 58 | 3.71 | 1.71 | 3.72 | 1.70 | 3.28 | 1.59 | 3.61 | 1.69 |
| | 59 | 3.02 | 1.66 | 3.69 | 1.73 | 3.53 | 1.63 | 3.29 | 1.70 |
| <i>Holism</i> | | 3.23 | 1.06 | 3.59 | 0.90 | 3.13 | 1.02 | 3.25 | 1.05 |
| | 14 | 3.24 | 1.57 | 3.77 | 1.13 | 3.04 | 1.28 | 3.32 | 1.43 |
| | 37 | 3.54 | 1.42 | 3.90 | 1.32 | 3.24 | 1.34 | 3.56 | 1.39 |
| | 61 | 2.83 | 1.71 | 3.16 | 1.51 | 3.35 | 1.65 | 3.03 | 1.66 |
| | 65 | 3.37 | 1.39 | 3.46 | 1.42 | 2.96 | 1.54 | 3.30 | 1.44 |
| <i>Practice</i> | | 2.45 | 1.06 | 2.93 | 0.93 | 2.83 | 0.97 | 2.65 | 1.03 |
| | 5 | 2.81 | 1.47 | 3.34 | 1.39 | 3.01 | 1.52 | 2.99 | 1.47 |
| | 17 | 3.27 | 1.66 | 3.94 | 1.53 | 3.26 | 1.68 | 3.42 | 1.66 |
| | 20 | 2.20 | 1.69 | 2.25 | 1.75 | 2.43 | 1.55 | 2.26 | 1.67 |
| | 30 | 2.45 | 1.49 | 3.33 | 1.48 | 2.96 | 1.56 | 2.77 | 1.54 |
| | 41 | 1.98 | 1.40 | 2.48 | 1.58 | 2.62 | 1.59 | 2.24 | 1.51 |
| | 66 | 2.02 | 1.50 | 2.19 | 1.58 | 2.58 | 1.55 | 2.18 | 1.54 |
| <i>Relatedness</i> | | 3.98 | 0.94 | 4.07 | 0.93 | 3.49 | 1.15 | 3.79 | 1.08 |
| | 25 | 4.23 | 1.20 | 4.17 | 1.25 | 3.44 | 1.64 | 4.03 | 1.37 |
| | 48 | 3.98 | 1.33 | 4.12 | 1.15 | 3.56 | 1.44 | 3.92 | 1.33 |
| | 56 | 3.69 | 1.36 | 3.89 | 1.29 | 3.27 | 1.47 | 3.64 | 1.39 |
| <i>Sacredness</i> | | 3.04 | 1.20 | 3.57 | 1.05 | 3.33 | 1.04 | 3.23 | 1.14 |
| | 8 | 2.99 | 1.57 | 3.63 | 1.34 | 3.55 | 1.44 | 3.28 | 1.51 |
| | 34 | 3.14 | 1.63 | 3.49 | 1.59 | 3.19 | 1.51 | 3.24 | 1.60 |
| | 57 | 2.67 | 1.62 | 3.14 | 1.51 | 3.22 | 1.52 | 2.91 | 1.58 |
| | 64 | 3.40 | 1.48 | 3.90 | 1.34 | 3.31 | 1.63 | 3.50 | 1.50 |

NB: Question numbers in bold were reverse scored.

Table 5.5: Descriptive statistics for Truth domain

| Domain/subgroup | Q# | Academic | | Groups Creative | | Control | | Total | |
|------------------------|-----------|-------------|-------------|--------------------|-------------|-------------|-------------|-------------|-------------|
| | | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| Truth | | 3.48 | 0.68 | 3.28 | 0.65 | 3.47 | 0.63 | 3.43 | 0.66 |
| <i>Egolessness</i> | | 3.19 | 1.04 | 3.11 | 0.95 | 3.56 | 1.16 | 3.25 | 1.06 |
| | 46 | 2.78 | 1.45 | 2.92 | 1.52 | 3.34 | 1.55 | 2.94 | 1.50 |
| | 63 | 3.78 | 1.48 | 3.66 | 1.52 | 3.83 | 1.59 | 3.76 | 1.51 |
| | 78 | 3.05 | 1.69 | 2.79 | 1.65 | 3.35 | 1.64 | 3.05 | 1.68 |
| <i>Equanimity</i> | | 3.41 | 1.01 | 3.45 | 0.81 | 3.41 | 0.88 | 3.42 | 0.93 |
| | 3 | 3.89 | 1.23 | 4.12 | 0.96 | 3.70 | 1.44 | 3.90 | 1.22 |
| | 9 | 3.25 | 1.33 | 3.02 | 1.34 | 3.56 | 1.47 | 3.22 | 1.37 |
| | 32 | 3.05 | 1.38 | 3.19 | 1.36 | 3.18 | 1.37 | 3.11 | 1.37 |
| <i>Inner-wholeness</i> | | 3.87 | 1.07 | 3.61 | 1.13 | 3.93 | 0.89 | 3.80 | 1.06 |
| | 18 | 4.49 | 1.45 | 4.46 | 1.71 | 4.48 | 1.56 | 4.48 | 1.56 |
| | 55 | 3.63 | 1.39 | 2.98 | 1.25 | 3.58 | 1.32 | 3.46 | 1.37 |
| | 69 | 4.03 | 1.60 | 3.98 | 1.80 | 4.00 | 1.58 | 4.01 | 1.64 |
| <i>Openness</i> | 82 | 3.27 | 1.86 | 3.00 | 1.87 | 3.51 | 1.75 | 3.26 | 1.84 |
| | | 3.08 | 0.92 | 2.78 | 0.88 | 3.18 | 0.86 | 3.02 | 0.90 |
| | 7 | 3.16 | 1.35 | 3.16 | 1.46 | 3.45 | 1.38 | 3.23 | 1.38 |
| | 11 | 2.42 | 1.38 | 1.89 | 1.16 | 2.60 | 1.60 | 2.33 | 1.41 |
| <i>Presence</i> | 60 | 3.70 | 1.46 | 3.51 | 1.61 | 2.96 | 1.58 | 3.49 | 1.55 |
| | 81 | 3.02 | 1.53 | 2.53 | 1.43 | 3.58 | 1.44 | 3.02 | 1.53 |
| | | 2.76 | 0.96 | 2.39 | 0.91 | 3.25 | 1.01 | 2.78 | 1.00 |
| | 23 | 3.28 | 1.41 | 2.51 | 1.22 | 3.21 | 1.51 | 3.08 | 1.43 |
| <i>Trust</i> | 33 | 2.64 | 1.48 | 2.13 | 1.39 | 3.35 | 1.52 | 2.68 | 1.52 |
| | 75 | 2.37 | 1.29 | 2.53 | 1.30 | 3.15 | 1.56 | 2.58 | 1.39 |
| | | 4.33 | 1.10 | 4.16 | 1.02 | 3.93 | 0.89 | 4.18 | 1.06 |
| | 2 | 4.65 | 1.25 | 4.43 | 1.27 | 4.36 | 1.59 | 4.53 | 1.35 |
| | 22 | 4.17 | 1.44 | 3.77 | 1.60 | 3.84 | 1.49 | 4.00 | 1.50 |
| | 26 | 4.43 | 1.56 | 4.05 | 1.47 | 3.79 | 1.59 | 4.20 | 1.57 |
| | 68 | 4.05 | 1.55 | 4.37 | 1.44 | 3.69 | 1.57 | 4.05 | 1.54 |

NB: Question numbers in bold were reverse scored.

These results were conditioned by a significant Group x Domain interaction, $F(8, 1400) = 11.78, p < .001$, partial $\eta^2 = .06$ (see Fig. 5.1). Post-hoc REGWQ analyses to investigate between-group differences indicated that: (1) all three giftedness groups significantly differed in Consciousness scores (Creative: $M = 4.17, SD = 0.61$; Academic: $M = 3.85, SD = 0.75$; Control: $M = 3.37, SD = 0.94$); (2) Creative ($M = 3.91, SD = 0.61$) and Academic groups ($M = 3.81, SD = 0.65$) displayed significantly higher Grace scores than the Control group ($M = 3.41, SD = 0.74$); (3) the Creative group had significantly higher Meaning and Transcendence scores (Meaning: $M = 3.48, SD = 0.62$; Transcendence: $M = 3.42, SD = 0.78$) than either the Academic (Meaning: $M =$

3.13, $SD = 0.79$; Transcendence: $M = 2.98$, $SD = 0.92$) or Control groups (Meaning: $M = 3.12$, $SD = 0.83$; Transcendence: $M = 2.99$, $SD = 0.86$); and (4) there was no significant difference between groups in terms of Truth scores (Academic: $M = 3.48$, $SD = 0.68$; Control: $M = 3.47$, $SD = 0.63$; Creative: $M = 3.28$, $SD = 0.65$).

Post-hoc pairwise comparisons to investigate within-group differences indicated that for the creative group, Consciousness scores were highest ($M = 4.17$, $SD = 0.61$), followed by Grace scores ($M = 3.91$, $SD = 0.61$) and then Meaning ($M = 3.48$, $SD = 0.62$), Transcendence ($M = 3.42$, $SD = 0.78$) and Truth scores ($M = 3.28$, $SD = 0.65$), which did not significantly differ. This pattern of results differed somewhat in the Academic group, with no significant difference between Consciousness ($M = 3.85$, $SD = 0.75$) and Grace scores ($M = 3.81$, $SD = 0.65$), although these scores were higher than scores in the other three domains. Among the other three domains, Truth scores were highest ($M = 3.48$, $SD = 0.68$), followed by Meaning scores ($M = 3.13$, $SD = 0.79$) and then Transcendence scores ($M = 2.98$, $SD = 0.92$). Lastly, for the Control group, there was no significant difference between Consciousness ($M = 3.37$, $SD = 0.94$), Grace ($M = 3.41$, $SD = 0.74$) and Truth scores ($M = 3.47$, $SD = 0.63$), yet these were significantly higher than Meaning ($M = 3.12$, $SD = 0.83$) and Transcendence scores ($M = 2.99$, $SD = 0.86$), which did not significantly differ.

Considered together (and seen in Fig. 5.3), different patterns of results are apparent in each domain. In the Consciousness and Grace domains, the Creative group had higher scores than the Academic group, which, in turn, had higher scores than the Control group. Similar results are apparent in the Meaning and Transcendence domains, such that the Creative group had the highest scores, but the Academic and Control groups did not significantly differ. This pattern of results is reversed in the Truth domain, such that the Creative group scored significantly lower than the Academic and

Control groups, which did not significantly differ. These results were only partly in line with expectations. That is, the expectation that the Creative group would score highest across all domains was supported in four out of five domains. In the Truth domain, and contrasting expectations, the Creative group actually scored lowest among the groups.. Further contrasting expectations, there were only two domains (Consciousness and Grace) for which a significant difference between the Academic and Control groups in spirituality scores were noted.

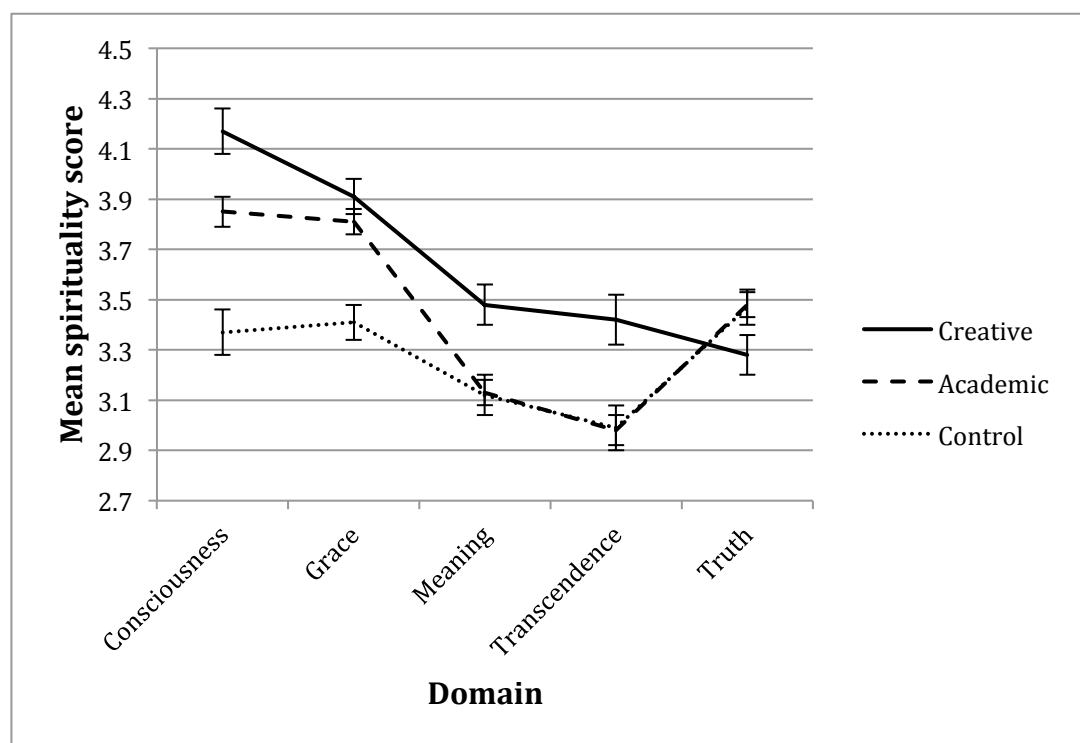


Figure 5.3: Group spirituality means by domain

5.6 Conclusion

Results thus largely supported hypotheses of creatively gifted students scoring higher on overall spirituality and most spiritual domains. In contrast, academically gifted students scored higher than the control group overall, but this was a function of higher scores in only two spirituality domains. While there were no overall differences between the sexes in terms of spirituality scores, there was a notable difference in the

profile of spirituality scores as a function of sex and giftedness group (such that females differed in spirituality scores as a function of giftedness group, whereas males did not). The following chapter will provide a discussion of these results and attempt to interpret them, to provide a framework for further research and practice.

Chapter 6: Discussion

It is what the child learns in himself, for himself and for the sake of his/her fellow human beings that really matters. (Jarman, 1996, pp. 10–11)

6.1 Introduction

As the literature ascribes higher levels of spirituality to gifted students than non-gifted students, the current study sought to establish whether there are different levels of spirituality within the types of giftedness. In this aim, considering the absence of prior research that examines differences in spirituality by type of giftedness, it provides novel and converging evidence that addresses the research questions and associated hypotheses. Specifically, results indicated that the Creative individuals rated themselves significantly higher than all other groups on spirituality overall. The Academic gifted group also had significantly higher overall spirituality ratings than the Control group, which comprised the merged original control group with the sporting gifted. Further, these results differed by both sex and domain. The sex differences reflected the same group order as overall spirituality (Creative, Academic, Control) for females, yet there were no significant differences between the male ratings as a function of gifted group. The domain scores followed the same general pattern, with the exception of Truth, but were less clear-cut. These results suggest that the higher levels of spirituality ascribed to gifted students as a whole may be misleading, as there is an identified interaction between giftedness type and sex.

6.2 Giftedness group effects

The presence of a higher level of spirituality in gifted students has been noted by authors such as Piechowski (2002, 2003, 2006, 2009), Roeper (1995) and Sisk (2008),

notably through the tendency for gifted to have a more-highly evolved sensitivity to moral and ethical standards. Such views tend to treat gifted students as a homogeneous group for spiritual factors, where all gifted students have a higher level of spirituality than the non-gifted. This assumption is compounded and reinforced by an absence of research literature exploring variations in spirituality level according to type of giftedness. The data from the current research thus provides a baseline estimate of spirituality levels as a function of giftedness type that has not previously been available, allowing the data to inform both subsequent hypotheses and future research.

The types of giftedness present in the current research – Academic, Creative and Sport – were chosen partly because of the availability of participating high schools with those specialities. They were also suitable because of the contradictory literature base in regard to spirituality for these forms of giftedness. In the literature there does appear to be an implicit expectation that creative individuals, regardless of whether they are gifted or not, are more spiritual (e.g., Cameron, 1994), as if higher spirituality is a pre-requisite for being creative. This contrasts sharply with sport where, although literature on the development of sporting prowess is abundant, far less consideration is given to the spiritual aspects of sporting giftedness, other than for personal participatory factors (e.g., Brymer & Gray, 2009, 2010; Humberstone, 2011). As Academic comprise the most-obvious, and perhaps most accepted, form of giftedness, as well as being a distinct ‘talent’ in Gagné’s (2008) DMGT (as is Sports and Athletics), Academic thus provides a point of reference for Creative and Sport.

When conducting analyses, the responses of the sporting gifted displayed no significant difference to the original Control, so the sporting gifted were included in an extended Control group. This result contradicted expectations that all gifted groups would have higher ratings of spirituality. However, results did indicate significantly

higher overall spirituality scores among the Creative group relative to all other groups. The Academic group also had significantly higher overall spirituality ratings compared to Control, but significantly lower than Creative. Subsequent analyses aimed to further understand these results as a function of sex and spirituality domain. There were distinct differences between male and female scores, suggesting that sex has a significant role.

6.3 Sex effects

Whether sex was a further factor in the spirituality scores, as a function of type of giftedness, was addressed through seeking to answer two hypotheses: 1) creative gifted students, both male and female, will have the highest self-reported levels of spirituality; and 2) all gifted groups, of both sexes, will have higher self-reported levels of spirituality than the non-gifted control group (discussed in 6.2). A distinct pattern of results was found for female participants, which was not found with the male participants. Specifically, all female groups significantly differed from each other, such that Creative gifted females rated higher on overall spirituality scores, followed by Academic gifted females, which in turn was rated higher than Control females. By contrast, there were no significant differences between any of the male groups. Hypothesis 1 was thus only partially supported by the data.

There was a clear, and significant, distinction between the spirituality scores for males and females. It is less clear why this would be the case. At first glance, the male spirituality scores could be interpreted as suggesting that there is little differentiation in levels of spirituality amongst males. Females, by contrast, vary so widely that identifying the source(s) of these differences may be problematic. Tirri and Ubani (2004) and Ubani (2010) noted a qualitative difference in how males and females approach spiritual concerns, where girls were more inclined to existentialist

considerations and the spirituality of boys was linked to their relationship with nature. There appears to be an underlying suggestion by Tirri and Ubani that girls are more likely to value interpersonal considerations, directed at understanding their place in, and relationship to, the world. This would imply that boys devote fewer resources to interpersonal considerations, suggesting that males and females have different ways of thinking spiritually. Why this should be the case may be the result of an interaction of genetic and cognitive factors – where sexes are hard wired to think in a certain way – or socialisation – where the influences surrounding a child encourage a given way of interacting with the world.

The genetic bases for sex differences in spirituality are contentious, at best (Foster, 2011), with a more likely relation to evolutionary psychology (Beauregard & O’Leary, 2008). Intelligence – as represented through IQ and *g*, for example – has the most commonly cited genetic bases for cognitive functioning, but is itself the subject of debate of both whether it is actually intelligence that is being measured and how intelligence should be defined. Indeed, Sisk and Torrance (2001) viewed spiritual intelligence as a unifying form of intelligence, a ‘master key’ to the functions of other intelligence aspects. Even within this context, there is minimal research that compares male and female intelligence. Intelligence is acknowledged as a desirable cognitive construct, but its genetic basis, when differentiating by sex, is open to question. As such, the role of socialisation, where there is a solid foundation for sex differences may provide a stronger theoretical and empirical base from which to interpret the current results.

Socialisation of sex roles and behaviours occurs from the moment of birth, when infants are commonly dressed according to what is perceived by the parents, from their own schemata, to be appropriate to the sex of the infant. Language use is sex

differentiated at an early age. In make-believe play, children use lower pitches and a demanding tone when adopting a male role, while the female role features higher pitch and a polite tone (Blakemore, Berenbaum & Liben, 2009). Such behaviours arise as a result of imitation and modelling (Bandura, 1971). In line with Bandura's social cognitive theory, how parents approach topics, such as emotions or empathy, with their children will influence the children's understanding and expression of that topic. Parents, of both sexes, "are more likely to talk about emotions with daughters" (Blakemore, Berenbaum & Liben, 2009, p. 281), while empathy is a skill that is less encouraged in boys, who are more likely to suppress emotions (Blakemore, Berenbaum & Liben, 2009; Bosacki, 2001).

The MSI input of imitation is thus modified through the self via modelling in the process of identity formation, with the socialising aspect providing a key determinant to individuals' development of spiritual identity. In particular, boys are less likely to be socialised to behaviours that are clearly connected to spirituality, whereas girls are more likely to be directed into behavioural avenues, such as concern for others, that have a greater depth of spirituality and are tied to being "culturally desirable" (Bosacki, 2001, p. 209). On that basis, however, the boys in the study should have scored lower than the girls, regardless of type of giftedness. This was not the case (except in the Creative gifted group), but the boys' results did display a more-restricted range that is suggestive of a commonality of perceptual approach at a group level. Extending the perceptual commonality into the spiritual seems logical, if a consistency of male functioning is accepted. This would initially appear to conflict with Shaywitz et al.'s (2001) study that identified the heterogeneity of behaviour among gifted boys, although as this was IQ based it would have only been directly relevant to the academically gifted group and is more related to observable behaviours than cognitive consequences of giftedness.

Observation and modelling are not the only processes that children draw upon, with practice being an important factor. If a process is not encouraged, however, then it is less likely to develop to its potential. The role of encouragement is dependent upon what is valued by the caregiver. The sex basis of this can be seen when parents use more-technical vocabulary with boys than girls (Tenenbaum & Leaper, 2003; Tenenbaum et al., 2005). Realising what is valued by a role model, such as a parent, through encouragement, influences the thinking of the child in a particular direction. A dismissive attitude “leads to repressing rather than refining the child’s spiritual nature” (Hart, 2003, p. 3), in the process, overlaying the child’s innate sensitivities with negative connotations. A positive attitude gives the child ‘permission’ to follow their nature, but all interactions contribute to shaping “a child’s worldview, values, and character” (Hart, 2003, p. 171). The more-existentially focused cognition of girls, identified by Tirri and Ubani (2004) and Ubani (2010), may be a result of a greater emphasis placed on interpersonal and intrapersonal MI for girls than boys, whereby the latter are often actively discouraged from existential concerns in favour of more-concrete thinking (e.g., Blakemore, Berenbaum & Liben, 2009; Bosacki, 2001). Boys seem to be channelled into a narrower range of thinking than girls, consistent with the current data, whereas girls are channelled toward existential concerns and empathy, which are key aspects of spirituality and open to individual interpretation. Given that spirituality research has existentialist concerns at its core, as does the current research, poorer performance by males may be predicated on their *gender* (psychological) rather than on their *sex* (biological). The differences in parental conditioning between boys and girls suggested by Tenenbaum and Leaper (2003), Tenenbaum et al. (2005) and others may contribute to children’s acquisition of a mindset that applies a gender delineation to spirituality, of both breadth and depth. This would be as a result of less

importance being placed on existential considerations with boys than with girls, with consequently less emphasis on developing those considerations. While this would contribute to an understanding of the minimal differences between the boys' spirituality scores, regardless of type of giftedness, it seems to work against the range of difference exhibited between the girls' scores.

Type of giftedness may be a key factor. Both the female subjects in Tirri and Ubani (2004) and the male subjects in Ubani (2010) had a similar giftedness profile to the Academic group from the current research. If Tirri and Ubani's findings are taken at face value, it would suggest that a scale that measures spirituality in academic giftedness would have differing results for males and females, due to the different approaches to spirituality. The Academic group in the current research, however, does not fit with that suggestion, where there was no significant difference between male Academic and female Academic.

The type of thinking that is valued for academic pursuits is highly consistent for both sexes, where convergent thinking, for which "knowledge provides a well from which ideas are drawn" (Cropley, 2006, p. 395), rather than divergent thinking, which "generates *variability*" (Cropley, 2006, p. 392; original italics), is the norm, at least in schools. Divergent thinking is acknowledged as playing an important role in giftedness (Runco, 2004), although its place as "a predictor of original thought, not a criterion of creative ability" (p. 160) suggests that it is still subject to the strictures of giftedness type. As such, while the male Academic and female Academic may be socially influenced by their interactions to think differently, they are also influenced to respond in a particular way due to their academic context. The similarity in the male Academic and female Academic scores thus has the potential to be attributed to academic influence trumping social influence.

How to explain the Creative and Sport/Control female differences is another matter. Creative, at least, may have its grounds in the optimal interaction of sex and type of giftedness. As previously discussed, there appear to be indications that females are more likely to be socialised to existential considerations than males (Blakemore, Berenbaum & Liben, 2009; Bosacki, 2001; Tenenbaum & Leaper, 2003; Tenenbaum et al., 2005; Tirri & Ubani, 2004; Ubani, 2010). Combining this with expectations of higher spirituality among creative people (e.g., Cameron, 1994) would create the optimum conditions for the female creative to rank highest in spirituality. This reinforcement of what is often perceived to be the elevated natural order for creative individuals stands in contrast to the lower perceptions of giftedness beyond the physical for exceptional-ability sport-inclined individuals. Both academic and creative types of giftedness utilise higher-order thinking, whereas for athletes of all types, “thinking and action seem to lie at opposite ends of the behavioural spectrum” (Moran, 2012, p. 85) when, in reality, they are “inextricably linked” (p. 90). Giftedness is evident in all three types, but the type of thinking differs. For sporting giftedness this is most evident through decision making (Johnson, 2006), visualisation (Moran, A., 2009; Moran & MacIntyre, 2008) and perceptual awareness (Faubert & Sidebottom, 2012). The latter two are also evident in creative individuals, but in different contexts⁶. While definitively cognitive processes, visualisation and perception are often utilised by creative individuals in the active development of a piece of work for display or performance. For those with sporting giftedness these processes, while equally valuable, are more likely to be reactively triggered in response to transient context and circumstances. The active–reactive distinction may contribute to the difference between Creative and Academic scores in the current study. While both types of giftedness involve a high

⁶ While ‘creative’ in this context refers to artistic expression through display and/or performance, visualisation and perception are relevant to a much-wider range of fields.

level of cognitive functioning, they may be applied differently. A deeper and more-sustained consideration of context and purpose is more characteristic of the creative process than is the case for sport. That depth of sustained thought, a key consideration of spiritual development, is the crucial distinction between the Creative and Academic, which suggests that Creative *should* score significantly higher than Sport.

6.4 Domain effects

An additional aim of this study was to further investigate gifted group differences as a function of domain of spirituality, such that there may be distinct profiles of perceived strengths and weaknesses across these domains. The ISIS scale, as the research instrument (Amram & Dryer, 2008), allowed consideration of spirituality scores across the scale's five domains: Consciousness, Grace, Meaning, Transcendence, Truth. These domains represent "super-ordinate natural classes" (Amram & Dryer, 2008, p. 17) that "reflect higher-order domains of spiritual intelligence" (p. 17). They were, however, initially purely conceptual groupings of the 22 subscales (see Table 4.1), rather than having an empirical basis. Subsequently, each of the domains were validated by Amram and Dryer (2008) through comparison with INSPIRIT (Index of Core Spiritual Experiences; Kass et al., 1991) scores. Other than Amram and Dryer (2008), there does not appear to be any extant research that supports these groupings of items into spirituality domains. As such, the interpretations that follow are necessarily tentative. Nevertheless, analysis of domain effects allowed the sample population's responses to inform two hypotheses: 1) creative gifted students will have higher levels of spirituality across all domains; and 2) the gifted groups will be largely consistent in their self-reported levels of spirituality across domains.

Whereas there was partial support for a sex by gifted group interaction in overall spirituality scores, the hypothesis of domain consistency within type of giftedness – where the rank of a group’s spirituality score in any domain would be matched in all others – was largely unsupported by the data. The Creative gifted group was the most consistent, and thus closest to supporting the hypothesis, with significantly higher scores in Consciousness, Meaning and Transcendence. The Creative score for Truth, however, was significantly lower than both Academic and Control. The expectation that Control would be lowest in all domains was not conclusively borne out either, with a negligible difference to Academic in three of five domains. Across the domains, only Creative scored consistently, even then only relative to Academic and Control’s inconsistency. This suggests that there may be an unmeasured factor differentiating the domain responses by type of giftedness (e.g., experiential factors), which requires further research to explore.

The hypothesis that Creative would be rated highest across all spirituality domains was supported in four of the five domains, but not Truth, where Academic and Control were highest (but did not significantly differ from each other). This unexpected result in the Truth domain may also have its explanation (at least in part) in sex differences. To explain, the participating schools differed in their ratio of males to females. Specifically, the Creative school had a significantly higher female to male student ratio than is the norm, which is reflected in the participant profile (percentage female: Creative = 65%; Academic = 52%; Control = 47%). Where there are gender differences in responses, this imbalance could skew the results (positively or negatively). The differences between group domain scores for males are typically much smaller than for females, reflecting the overall spirituality scores, but follow the same patterns. Of particular note is the significant stability for female rankings across the

domains of Meaning, Consciousness, Grace and Transcendence. The same pattern was identified by Amram and Dryer (2008), who noted that “for the four statistically significant domains, women had higher mean scores than did men across the domain scales” (p. 24). This suggests that sex differences may have had some impact on the actual domain score for each group, where a higher female participant percentage could equate to a higher mean score. In this context, the markedly higher female participant percentage of the Creative group should equate to higher ISIS scores, which it did. Indeed, the female percentages of Creative (65%), Academic (52%) and Control (47%) broadly reflect the domain pattern results, with limited difference between Academic and Control a factor in both their variations and commonalities. The exception here is for the Truth domain. Again, though, sex is implicated. In their ISIS analysis, Amram and Dryer (2008) noted that “the gender [sex] effect was not significant for Truth” (p. 24). Where females had higher mean scores than males in the other domains, Amram and Dryer recognised that the same principle could not be applied to Truth. For the current research, it appears to be the case that where the markedly higher female participant percentage in the Creative group may have resulted in increased scores for the domains of Consciousness, Grace, Meaning and Transcendence, whereas for Truth it may have had no effect or, at worst, influenced scores lower.

6.5 Confounding factors

There are a number of factors, common to both research questions and hypotheses, which could have impacted on the results and which will be discussed here. While the three high schools used all expressed an interest in participating, attempts to recruit further schools were hindered by the research topic. Other specialist schools in all three gifted categories were approached but declined on the grounds of relevance.

Specifically, ‘spiritual’ was problematic, as the other schools did not see its relevance for either their gifted or non-gifted students. This contributed to a lower than desired population in all categories, as well as limiting geographic and demographic participation, which may impact on generalisability of the current results.

The Control and Sport groups were drawn from the same high school and, thus, potentially drawn from the same demographic. This may be mitigated by the fact that the Sport TSDP group was comprised of participants from a wider area than the non-TSDP students, who were primarily local-area students. Behaviour differences were noted by the researcher at the time of data collection, with the Sport group noticeably more restless about having to ‘give up’ time to complete the survey, as well as being generally dismissive of its relevance (especially the Sport males), while the original Control group (both male and female) was more subdued and interested. Differing motivations/attitudes within the Sport group (sex) and between the Sport and Control groups raise the possibility of variance “within the person being measured” (Mertens, 2010, p. 381), that is, factors of variance between how individuals approach the research influencing how they respond. The attitudes of the two groups to completing the survey instrument, and the research relevance, may have influenced the level of consideration given to their responses. This would have restricted the Sport scores, which thus may not be a true indicator of spirituality for Sport. Any differences between responses for the Sport and Control groups could be indicative of a delineation between expectations for the two groups. The suspected delineation, however, was not borne out through analysis, where there was no significant difference between spirituality scores for the Sport and Control groups.

There were significant differences in both socio-economic (SEIFA⁷ ranking; Australian Bureau of Statistics, 2013) and academic profiles (identified by 2013 HSC rankings; see discussion in 4.3) of the three schools, which was reflected in the respective participant profiles. Whether this contributed to the spirituality differences is possible, if debatable. For instance, the Creative group scored significantly higher in overall spirituality, followed by the Academic group and then the Control group. If socio-economic profile was an influential factor in this difference, then a reasonable expectation would be that School C's socio-economic profile (IRSAD decile 3) would be significantly higher than School A's (IRSAD decile 5), which was not the case. Both School C and School A draw from a wide socio-economic and geographic region, with School A weighted toward the middle and upper classes. School C's auditioned student population ($\approx 40\%$) also has an upper-class component, but not exceeding that of School A. Both School C and School A were ranked in IRSD decile 3 (Australian Bureau of Statistics, 2013). There is thus no readily discernible difference in the socio-economic profiles of School A and School C.

The socio-economic profile of School S (IRSAD 1, IRSD 1), however, is markedly different to both School A and School C, for both Sport and Control. The TSDP (Sport) population ($\approx 30\%$) is drawn from a wide socio-economic and geographic area, but is predominantly low socio-economic profile, while the local area students comprise the remaining $\approx 70\%$. School S is situated in a low socio-economic area, with the local-area students also from low socio-economic backgrounds. There is thus significance in the low socio-economic profile of School S and its participants,

⁷ Socio-Economic Index for Areas, as measured in the 2011 national census, by IRSAD score (Index of Relative Socio-Economic Advantage and Disadvantage), where a lower number is an indicator of greater disadvantage and limited advantage, and IRSD score (Index of Relative Socio-Economic Disadvantage), where a lower number is an indicator of greater disadvantage, scored 1–10.

particularly when considering that there was no significant difference in the Sport and Control scores. Social class may be positioned as a causal factor in the spirituality scores, but this is only for the extremes. Schools A and C are at the more-privileged end of the socio-economic spectrum, with School S at the less-privileged end, which may have had an influence on the spirituality scores.

Socio-economic profile may not be the only confounding factor differentiating the schools. School S has a high percentage of Aboriginal and Torres Strait Islander students, significantly higher than either School A or School C (Department of Education and Training, NSW, 2001). No attempt was made in this research to record the cultural background of participants, however. As such, just as IQ testing is widely considered to have a racial bias, it may be the case that the ISIS scale is not connecting to the cultural understandings of the Aboriginal and Torres Strait Islander students in the Sport and Control groups, with potentially different effects across groups given the significantly lower proportion of Aboriginal and Torres Strait Islander students in the Academic and Creative groups. Rather than being less spiritual, Aboriginal and Torres Strait Islander students may be *differently* spiritual, such that the spirituality measured by ISIS is less relevant to them.

In order to address concerns from these confounding factors, further research would need to be undertaken. Specifically, this would need to utilise a larger population completing the ISIS scale as part of a battery of scales, with each type of giftedness drawing on a wide socio-economic profile and comparable sex profiles. This would allow the results from the ISIS scale to be compared with results from other scales, while also allowing more-detailed analysis within racial, sex and gifted groups. In order to do this, however, data would need to be collected on social and economic status of both schools and participants, as well as race affiliation, so that school profiles were not

generalised to student participants. In the non-gifted field, there is potential for assessing the utility of ISIS for aboriginal groups through utilisation with both aboriginal and non-aboriginal groups, rural and urban. Prior to this, consultation would need to occur with aboriginal groups to establish what types of testing/comparison would be suitable.

6.6 Theoretical considerations

The observations noted in the preceding discussion can be related to Gardner's MI (1993, 2006), Gagné's DMGT (2008, 2009) and Walton's MSI (2010) theories to varying degrees. The conceptual overlap between MI and DMGT (see Ch. 2), in regard to development of the attributes associated with the research sample, can inform how gifts develop into talents and how intelligence is developed into practice, framed in a generalised, contextual macrocosm. Neither the DMGT nor DMMI have an express consideration of the spiritual and its development. The nearest they come is Milieu (EM), where the actors influencing the individual as a person are framed, but this is incidental rather than deliberate. The MSI, however, explicitly deals with the individual's personalised microcosm, where *everything* that is experienced is internalised. Together, the DMMI and MSI can provide a more-complete framework for adolescent spirituality, while neither makes a sex-based distinction.

6.6.1 MI factors

The schools used in this research emphasise different forms of intelligence. As a result, not only are they representative of different types of giftedness but also of different types of thinking, exhibited through MI:

- School A (Academic) = logical-mathematical/linguistic

- logical-mathematical – inductive and deductive reasoning, can be both logical and linear, scientific thinking, patterns
- linguistic – understanding and application of language patterns; use of language to express, assess and remember
- School C (Creative) = musical/spatial/interpersonal/intrapersonal
 - musical – understanding and application of musical patterns; near parallel to linguistic
 - spatial – makes meaning through relations with space and positioning; crucial for problem solving
 - interpersonal – understanding, and working together with, others
 - intrapersonal – understanding of self in order to facilitate spatial and interpersonal
- School S (Sport) = bodily-kinæsthetic
 - bodily-kinæsthetic – cognition controls body movement; mental and physical are related.

There are aspects of all MI in every school and every individual, but the specific emphases of these three schools may be manifesting the MI through the spirituality scores, as a result of the different ‘types’ of thinking that are implicitly encouraged and subtly exhibited. The thinking associated with each MI is qualitatively different.

There are assumptions, both academic and non-academic, about the capacities and proclivities of creative, academic and sporting profiles. Creativity, in particular, is a commonly misunderstood concept. For the general public, to be ‘creative’ is to be good at artistic pursuits, whereas creativity is also a cognitive function. Indeed, higher-level achievement in all fields is predicated by utilisation of creative thought (Davis, 2003). Creative thinkers may be more likely to open their mind, their cognition, to a wider

range of possibilities. Such an externally focused position would take into account others' perspectives – a representational trait that Winner and Martino (2003) associated with artistic giftedness. For example, an inventor would need to be aware of a 'need' and how that could be addressed to fill a gap in the market, with success governed by whether society perceives the same 'need'. Academic thinkers have high logical-mathematical and/or linguistic abilities which may be more internally focused, in the sense that, for example, a new mathematical concept has limited obvious connection to societal needs until it is applied in practice. Sport and thinking can be often popularly perceived as a misnomer, with a perception that sporting *ability* has limited, if any, relation to *intelligence*.

The assumptions, however, are not necessarily indicative of the actuality. From the above, creative thinkers may have a tendency toward divergent thinking, whereas academic thinkers may exhibit limited aspects of divergent thinking, such as when utilising problem solving, with the primary tendency toward convergent thinking, similar to Marjoribanks' (1978) observations on Hudson's work. But can it really be the case that academic thinkers are limited in their divergent thought processes when society's progression is dependent on academically creative thinking? In similar fashion, removing conscious and/or unconscious cognitive functioning from a sport orientation suggests that athletes do not need to think to perform, yet remove the input of the seat of cognition, the brain, and the body ceases to function. Indeed, mental functioning and physical functioning are intimately interrelated – Colzato et al. (2013) found that exercise reduced divergent, and thus creative, thinking in both athletes and non-athletes – but it is the value ascribed to the types of thinking that fashion perceptions of ability. Gardner's definition of intelligence as "biopsychological potential to process information that can be activated in a cultural setting to solve

problems or create products that are of value in a culture” (Gardner, 1999b, pp. 33–34) provides an opportunity for redefinition.

Societal ‘culture’ is a macro-concept (where ‘macro’ indicates a larger scale, e.g., Australian society), just as is what counts for ‘value’ within a culture. Any macro-culture also encompasses a variety of micro-cultures (where ‘micro’ indicates a smaller scale, e.g., ethnic sub-groups within Australian society), which themselves have subsidiary value structures. Both culture and value, thus, have hierarchical structures that can be accessed at different points for varied definitions of what counts as ‘culture’ and ‘value’. Part of that hierarchy are the micro-cultures of creativity, academia and sport (as in the current research), along with the assignment of value in each and whether these are consistent with the values of the macro-culture. There can be little doubt that each of the three micro-cultures contribute to the macro-culture, if not actually being integral parts of it. Therein lies a conundrum – whereas a macro-culture is a unit in itself, it is dependent upon the existence of micro-cultures, without which the quality of life would be diminished. What quality could be ascribed to a culture without creativity, academic thinking or sport? A culture without all three would be unthinkable by all but the most extreme. So, culture and value are componential, yet Gardner delineates intelligence by the alternatives rather than the commonalities. Gardner’s intelligences are about application rather than cognition, although the application is evidence of the cognition, in that whether something is of value is a judgement made by others. The Creative, Academic and Sport groups of the current research represent three culture groups within any dominant cultural group, but they are also different types of thinking, as already discussed. While the participants in the current research can be representative of different intelligences, they are taken to be representative of high

performance/potential in particular domains of giftedness. The spirituality of each group is also markedly different.

It was an ancient principle for many cultures that spirituality, like intelligence (Howard & Walton, 2015), resided in the heart (e.g., Dunlap, 1858). This principle continues today in some instances, including in an abstract sense in Shinto, where the heart is a constant reference point (Yamakage, 2006). For the purposes of this thesis, the mind is where spirituality resides (Beauregard & O’Leary, 2008), as a neurologically complex, abstract, schematic construction of self and identity. From an MI perspective, however, all of the research participants have the same intelligences, they just use their different strengths to navigate the means and routes of access. There are, thus, different values within and without each profile, but that does not equate to creative, academic or sport individuals being less important, less cognitively engaged or less spiritual. Everyone is spiritual and everyone has the potential to develop their spirituality (e.g., Hay & Nye, 2006; James, 1963; Tirri & Quinn, 2010; Walton, 2010), but a mind that is more open to, and accepting of, possibilities has greater scope for spirituality. Such an approach is more related to outlook on life than it is to intelligence, but is more evident through both the process of utilising creativity and female socialisation, resulting in higher spirituality scores.

The value that is placed on spirituality and its expression is moot, with confusion over what spirituality *is* being likely at its root. Spirituality is not concrete, whether of intelligence or identity, with its fluid and individual nature (Behl, 2015) making assessment difficult. While the spirituality scores in the current research are not *subjective*, they are also not definitive. While Gardner tied the possibility of spiritual/existential to being an intelligence, in practice the expression of spirituality,

and the spirituality scores, seems to be more tied to socialisation factors than inherent ability/perception.

6.6.2 DMGT factors

The hierarchy of the DMGT has been suggested by Gagné (2008) to be Gifts (G), Intrapersonal (I), Developmental process (D) followed by Environmental (E), with Talents (T) as an end result. The following discussion will adopt this same order, to facilitate theoretical connections.

Gagné's domains of giftedness (G) position the Academic and Creative groups as belonging to 'mental' domains, while the Sport group occupies both 'physical' domains (muscular, GM, and motor control, GR). Of the mental domains, Academic is most closely associated to Intellectual (GI) with Creative, not unnaturally, associated with Creative (GC). In practice, however, the distinction between the mental domains is not as neat as that for Sport. While Academic can acceptably be considered to be predominantly GI, the 'inventiveness', at least, of GC is a necessary prerequisite to conceptualise the GI factors and their expression. In this sense, Academic spirituality scores should be nearer Creative than Sport. As Academic spirituality scores were roughly in the middle of those for Creativity and Control, for both sexes, this effect is not conclusive. Creative's and Academic's GC link to other domains as well, notably Social (GS), as creativity and academic thought exist within social constructs. But the latter observation also applies to Sport, particularly spectator sports, which extends Sport beyond GM and GR. Both Creative and Academic have strong GC, but GC is logically more developed in Creative, as the basis of domain functioning, whereas GC is an extension for Academic. The same points can be made in relation to the DMMI, as Gardner acknowledged that even well-developed intelligences have relation to, and are sometimes dependent upon, factors of the other intelligences.

Intrapersonal (I) was noted as a factor in MI for the Creative group, as a foundation for understanding of form and effect. In the DMGT this is a factor for all as a *necessity* for success, regardless of domain, which also applies to the DMMI. Traits, as the qualities of the individual, influence goal management, which is essential to the active development of gifts into talents. Without adequate goal management the factors of Awareness (IW), Motivation (IM) and Volition (IV) may be insufficiently utilised. The Intrapersonal (I) factors are influenced through Developmental process (D). Gagné's domains and Gardner's complete intelligences do not provide an obvious avenue for spirituality within Developmental process, particularly in relation to the "*systematic pursuit ... of activities leading to a specific excellence goal*" (Gagné, 2008, p. 2; original italics). The problem with that aspect of Developmental process is twofold: 1) what would qualify as 'systematic pursuit' for spirituality? and 2) difficulty in external definition of 'specific excellence goal'. As an aspect of individual identity, responses to both points would be inherently subjective rather than quantifiable. This does not mean that Developmental process holds less relevance for spirituality, rather that a different perspective is needed. All of the components of Developmental process have relevance to talent development, but perhaps the most relevant for spirituality is turning points (in Progress, DP), where a specific event prompts the individual to examine and reflect upon their role in life and place in the world. While important for all three gifted groups as part of the talent development process, none of the Developmental process factors contribute to explaining the research results.

Gagné's positioning of Intrapersonal as the most important influence upon Gifts suggests that an understanding of self, whether through traits or goal management, is the principal factor in talent development, however, Environmental (E) factors provide a wider contextual framework of influence. While spirituality is formed intrapersonally,

its genesis may actually be in Environmental, through influences upon the individual from those in positions of value. In this context, both Milieu (EM) and Individuals (EI) are significant factors. The individual is positioned as an actor within a wider troupe of EI, subject to EM groupings. In 6.3 the topic was raised of how sex identity is related to the attitudes and behaviours the individual is exposed to, thus encouraging the individual to frame themselves within expected norms. If an individual has more exposure to spiritual understandings then these Environmental factors would make the individual more likely to express spirituality through their Intrapersonal considerations. This may be through a significant event, such as the turning point aspect of DP, or simply being part of an environment where encouragement, and acceptance, of freer thinking is embraced, where alternatives are to be explored. Such divergent thinking would be more associated with Creative, but does not preclude Academic or Sport. The research results appear to suggest that the socialisation factors associated with environmental influences are the key determinant of whether participants score highly for spirituality, and on the ISIS scale specifically. In particular, Milieu (EM) and Individuals (EI) perform key roles in socialising individuals into their societal roles, for both behaviour and cognition, with direct relevance to Creative females scoring significantly higher than any other group. Given the importance of Environmental for contextualised influences upon the individual and associated Intrapersonal factors, it appears to be the case that Environmental has a more-prominent role than Intrapersonal, which would suggest a re-ordering of Gagné's hierarchy to GEID. While the current research supports this reordering, at least for spirituality, this does not diminish the importance of Intrapersonal. All of the causal factors for the development of giftedness into talent are interlinked, but while the focus of Intrapersonal is on the individual every

individual is positioned within the Environmental influences around them, being changed by and adapting to those influences.

The final factor of Talents (T) does not differ in any way between DMGT and DMMI, as in both models T is about productive end-states. Gagné (2008) presents a non-elitist view of achievement/talent, where talent is not restricted to select “human occupations” (p. 2). From the perspective of this research, there is not just a commonality of talent – all talents have spirituality as their foundation. The remaining influence, Chance (C), is the province of accidents of birth and circumstance, or “birth and background” (Atkinson, 1978, cited in Tannenbaum, 1983, p. 205). While Gagné’s giftedness domains are predicated on the development of capacities, Chance operates in the background for all aspects of the DMGT bar Talents. The development of Chance from being a component of the original DMGT (Gagné, 2003) to an integral aspect of the updated DMGT (Gagné, 2008) is notable, not least because Gagné considered leaving it out of the DMGT 2.0 due to its ubiquity. The role of Chance in the catalysts of Environmental and Intrapersonal is significant, but raises further questions as to whether Environmental should be prioritised over Intrapersonal, as discussed above, whether completely or just for spirituality, as Intrapersonal works with what Environmental provides through contextual factors. For example, the ‘goal-management’ factors of Intrapersonal may be subject to influence from the actors in Environmental, just as the Environmental actors may directly influence the Intrapersonal ‘traits’.

6.6.3 DMMI factors

As a conceptual overlay of one theory onto another – Gardner’s MI onto Gagné’s DMGT – without significant alteration, the majority of the intent of the DMGT remains the same. Most of the comments in regard to the DMMI are the same as those of the

DMGT, so primarily points of difference will be addressed here. The most obvious of these is the replacement of Gagné's domains of giftedness with Gardner's intelligences. Essentially, though, this is a cosmetic change, as both are different theorists' versions of potential, neither of which are innate but are dependent upon the catalysts to become apparent. The headings of the DMMI components have been changed from the DMGT to fit with the components of Gardner's MI theory, but this does not affect the makeup of the factors, with one exception, where 'traits' have been reclassified as 'tools' and Physical (IF) amended to Practical. In 6.6.2 the point was raised about traits being the qualities of the individual, whereas tools are more relevant to access and application. Where traits have no direct influence on spirituality, tools do through the comingling of Distribution (I) and Contextualisation (E), reinforcing the reordering of GIED to GEID. It is through the socialisation aspects of Contextualisation that Practical becomes evident and spirituality can manifest itself. The three types of giftedness – Academic, Creative and Sport – while sharing some common instruction, also receive learning tailored to their giftedness, channelling and reinforcing the desirable aspects in their intelligence. Of the three types, creative individuals are far more likely to have an intrapersonal emphasis, with ready avenues within their field for translation to interpersonal considerations. The formal and informal skills and training that comprise Practical thus mirror aspects of Learning Environment (D), but through a socialised lens, bringing Contextualisation (E) to the fore. As in the DMGT discussion, above, the environment that an individual is exposed to is the primary socialiser, with the same arguments for its relevance to the research results.

6.6.4 MSI factors

The MSI positions everything an individual is exposed to as having the potential to influence their spiritual identity. In this sense, it does not provide a reworking of either

MI or DMGT, nor does it set out to propose a holistic learning theory. It is true that although the MSI was designed to demonstrate how spiritual identity is formed, the progression from *input* to *self* to *output* can be applied in other individualised fields (e.g., emotional development) if the components are changed. The focus here, however, is on relating the MSI to spirituality through its three core components.

The catalysts of the DMGT and DMMI would broadly correlate to *input*, particularly in relation to events within Milieu (EM), as would exposure to opportunities to develop MI. In each case, the nature of the individual forms the foundation of potential that is then subject to the various facets of nurture. The genetic–environmental correlation is, thus, positioned as a key determinant leading into *self*. Internalising *input* into *self* forms an individual’s spirituality, but that process of internalisation is navigated by accessing and utilising pre-existing schemata in a constant progression of *current self* to *future self*. Even explaining the concept of ‘who I am’ will change, however slightly, ‘who I am’ in the process. This dynamic process means that not only is *self* never static, but *output*, the individual’s spiritual identity, is also fluid. Yet forming a sense of identity is a key attainment in adolescence (Moran, S., 2009; Moriarty, 2011).

The MSI does not differentiate according to type of giftedness, but is a model for humanity as a whole, regardless of the explanation of ‘who I am’. As a result, opportunity to distinguish between the Creative, Academic and Sport groups is not provided explicitly. However, the spirituality score itself is the *output*, rather than a direct indicator of *input*. Where the three groups differ in their *output* (spirituality score), however, lies with the *input*. Whether sex based or giftedness based, the understandings internalised in *self* have been formed in the various social contexts within which they are positioned. As already discussed, socialisation influences both

sex effects (6.3) and domain effects (6.4) in spirituality scores through the way that individuals are conditioned to behave and think. In particular, the more-divergent cognition of creativity coupled with the greater likelihood of girls being encouraged to think existentially, albeit unintentionally, creates the ideal combination of factors for Creative females to have the highest spirituality score. While the *input* and *output* provide the socialisation and expressive factors, they are mediated by *self*, where the process of thinking through the *input* is essentially one of adaptation of schemata, to produce the *output*. Early understandings in *self* are formed through early exposure to *input*, positioning early experiences and their schematic structures as crucial influences on future spiritual development. The *output* spirituality scores are the result of *self* consideration of socialised *input*.

6.7 Conclusion

The current results provide initial evidence that spirituality varies according to type of giftedness, at least for the three giftedness types involved. Why that is the case is less evident, with socialisation through sex roles and behaviours seeming to play a role. Just as there are different expectations placed upon mothers and fathers (Lorber, 2009), so do parenting styles and parent–child dynamics vary (Kuczynski & Parkin, 2006), both in nature and over time, yet parents (or their proxies, such as foster parents) play the primary role in the socialisation of children (Grusec & Davidov, 2006). Along with social and economic factors, Polavieja and Platt (2014) identified demonstrations of parental behaviour as the primary sources of children’s career ambition. This suggests that overt parental behaviours are being assimilated into children’s schema of their own capacities. There is also the possibility that the dynamic within the family can lead to differences in how mothers and fathers treat their daughters and sons (Maccoby, 1998;

Wharton, 2005). Even then, though, parents' behaviour-management practices do not appear to align with parents' roles in the development of cognition (Gauvain & Perez, 2006). Bem (1983, 1993) introduced the concept of gender schema theory, where the socialisation of gender entails both forming and using gender schemas. In gender schema theory, the child is an "agent of gender" (Liben & Bigler, 2015, p. 5) through socialising the self. Rather than being a simplistic case of parents transferring gender constructs, a "relational approach" (Laible & Thompson, 2006, p. 181) may be applicable through a process of "mutual reciprocity" (p. 186). Children's socialised characteristics and/or behaviours can be thus acquired through a 'transaction' (Bates & Pettit, 2006) or a 'dynamic negotiation process' (Brinkman et al., 2014). While social experiences of children and young people vary, whether as passive recipients or active agents, from a very young age "the foundations of their gender schemas are being established" (Wharton, 2005, p. 126).

The inherent variability of individuals' social experiences may well be the strength of spirituality. Whether spirituality is viewed as an intelligence or not, a discussion which this thesis positions as redundant, it is nonetheless a complex construct, both acquired and applied in social contexts. The implications for spiritually oriented teaching (i.e., teaching that takes into account students' spiritual needs and concerns) are significant, particularly in relation to promoting positive holistic outcomes for students (Department of Education and Communities, NSW, 2015). Briggs and Rayle (2005), drawing on Myers, Sweeney and Witmer (2000), suggested that spirituality can be seen to be "an innate component of human functioning and serves to integrate other components of wellness, thus making spiritual wellness central to wellness in all other areas of life" (Briggs & Rayle, 2005, p. 70). The influence of positive spirituality in these 'other areas of life' includes increased resilience, reduced

depression and risk taking (e.g., Cotton et al., 2005; Damon, Menon & Bronk, 2003; Fraser, 2004; Miller, 2000; Ozaki, Kobayashi & Oku, 2006; Pargament, 2007; Tan & Wong, 2012; Taplin, 2011), mental health (e.g., Snyder & Lopez, 2007), maintenance of a balanced emotional, psychological and essentially social existence (e.g., Hay & Nye, 1996; Moritz et al., 2006; Saucier & Skrzypińska, 2006), character formation (e.g., Clifford, 2013; Tirri, 2009) and ethical behaviours (e.g., Büssing et al., 2010; Hay & Nye, 1996). Jackson and Moyle (2009) also identified spiritual aspects such as wisdom, ethics and moral reasoning as suggestions to support the gifted adolescent. Adopting a spiritually oriented teaching approach could provide the balance that positively aids the transitions from puberty to adolescence and from adolescence to adulthood. Both of these transitions are fundamentally interactionist, in that they are comprised of an interaction between the individual and a societal context that necessitates moving from one theatre of human influence and experience into another over time (see Bronfenbrenner & Morris, 2006, for a discussion of such change in the Bioecological model of human development).

The role of spirituality in human interactions is central, necessitating involvement and engagement (Solomon, 2007). There is a common thread of research that positions relationality and connectedness as central (e.g., Hay & Nye, 2006; Hemming, 2013; Ng, 2012). For adolescents, social networking appears to serve these functions, but while social networking is a process of making connections, it is questionable whether this would contribute to cyber spirituality (communal) or pseudo-spirituality (isolationist) (Yust, Hyde & Ota, 2010). Given the variations in students' home lives, teachers provide a consistent thread that can be used to develop positive spirituality, with consequent positive effect both in school and life. This applies equally to the teaching environment as teaching practice. Hemming (2013) recognised that the

school environment could be structured to encourage students' spiritual agency, through informal 'spiritual spaces' in school, which his research participants tied to emotion (Hemming, 2013). Spaces that students connect to are more likely to be sought out, where they can "quite consciously and deliberately choose to exercise their agency through stillness and quiet" (Hyde, Yust & Ota, 2010b, p. 97). This also has potential links to gifted students' awareness of their natural environment, although Suzuki's (2004) observations extend this concept beyond the gifted by suggesting that engagement with the environment is positive for *all* students.

It is teachers themselves who are the facilitating agents in a spiritually open classroom, which becomes a question of teaching philosophy. For example, is a teacher's purpose to impart knowledge or to encourage learning? The two need not be mutually exclusive but often are. People have an 'eternal yearning' to both belong and contribute (Palmer, 2003); accessing this yearning in education can contribute to academic engagement. Fraser (2014) presents compelling stories of activating that engagement, including project-based approaches with real-life, contemporary relevance, of concern for others. A spiritually significant learning environment is one of education for freedom of thought, for self and community (Oberski, 2011), where "sustaining the heart of education is not about taking, forcing or imposing; it is about trusting supporting and nourishing ourselves and those in our midst through the timeless, intuitive reciprocity of mindfulness, wisdom and compassionate action" (McClain, Ylimaki & Ford 2010, p. 315). Fraser (2007) identified some examples of how this could take place, through teaching experiences that linked self and community. Community is integral to a child's sense of self, to whether or not they feel that they 'belong', and teachers play a key role. In this sense, teachers have some of the same improvisational functions as parents, where rather than teaching spirituality as a topic it

is often an impromptu inclusion, as a result of being “awake enough to offer the nourishing idea, pose the thoughtful question, or seize the insight at a moment when there is an opening – a soft and fertile spot for the seed to take root” (Hart, 2003, p. 174). The boundaries are shifting, though, into a more-structured inclusion of spirituality, at least in New South Wales public schools, whereby “all schools are *required* to have a planned approach to wellbeing in place that incorporates the elements of the Wellbeing Framework” (Department of Education and Communities, NSW, 2015, p. 7; emphasis added). This formalisation of the importance of spirituality to physical, social and emotional development, “in an enabling school environment” (p. 6), indirectly places an onus on tertiary providers of teacher training programs to prepare future teachers for the reality of a practice that needs to take the spiritual into account, for all students.

Spiritually focused education may even be seen to challenge traditional learning (Fraser, 2004). To do that, though, teacher training programs would need to recognise and include spirituality, defining which, Speck (2005) argued, should be “the focal point of academic dialogue” (p. 12). There is a need to include spirituality in tertiary education (Astin, Astin & Lindholm, 2011; Tisdell, 2003) and this is particularly important in teacher education where there is currently a “lack of practical guidance for spiritual development in classrooms” (Ng, 2012, p. 167). Spiritually aware teachers need to be reflective and flexible, while also being able “to think openly and critically” (Clifford, 2013, p. 273). In short, they need to be aware of their own spirituality to enable their students to develop a spiritual awareness that will enhance their communal perspectives, as in the teacher case studies identified by Fraser and Grootenboer (2004). Results from Astin et al. (2004) suggest that US tertiary students are more than willing to explore spirituality in their education. The challenge remains for the Australian

tertiary sector to adequately meet *our* students' needs, to prepare them for meeting *their* students' spiritual needs. This observation could equally apply to teacher trainees' understandings of giftedness and talent, given the low incidence of any form of giftedness education in teacher training programs (Fraser-Seeto, Howard & Woodcock, 2013).

While the above practice observations could be applied to all teaching, they are particularly germane to the significance of this research. Addressing the research aim of establishing a baseline for future research into the spirituality of diverse gifted populations has identified that there does, indeed, appear to be variability in the spirituality of adolescent academic, creative and sporting giftedness. The literature implies that all forms of giftedness may be characterised by higher levels of spirituality. However, this was only markedly so for the creatively gifted female group. Further examination of the qualities and attributes that contribute to the Creative females' spirituality scores can indicate how spiritual development might better be fostered with other groups through spiritually oriented learning, with the aim of increasing the spirituality of other gifted groups to promote positive holistic outcomes. This would, in turn, contribute to improved social and emotional outcomes for all gifted students.

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Appendices

Appendix 1: Original ISIS scale – statements only, which would be self-rated on a score of 1–6

Appendix 2: Adapted ISIS scale, renamed Life Perspectives Scale – front page plus remaining statements

Appendix 3: Sample Participant Information Sheet

Appendix 1

The Integrated Spiritual Intelligence Scale (ISIS)

1. I notice and appreciate the beauty that is uncovered in my work
2. I expect the worst in life, and that's what I usually get
3. When things are chaotic, I remain aware of what is happening without getting lost in my experience
4. During an activity or conversation, I monitor and notice my thoughts and emotions
5. I practice inner and outer quiet as a way of opening myself to receive creative insights
6. I have a good sense for when my purpose requires nonconformity, out-of-the-box thinking or taking an unpopular stand
7. I resist events that I don't like, even when they need to occur
8. In my daily life, I feel the source of life immanent and present within the physical world
9. I get upset when things don't go the way I want them to go
10. In my day-to-day activities, I align my purpose with what wants to and needs to happen in the world
11. I find it frustrating when I don't know what the truth is
12. I pay attention to my dreams to gain insight to my life
13. In my daily life, I am disconnected from nature
14. Seeing life's processes as cyclical rather than linear gives me useful insights to daily challenges
15. A higher consciousness reveals my true path to me
16. I live and act with awareness of my mortality
17. In difficult moments, I tap into and draw on a storehouse of stories, quotes, teachings or other forms of time-proven wisdom
18. I don't know how to just be myself in interactions with others
19. I hold my work as sacred
20. I have a daily spiritual practice – such as meditation or prayer – that I draw on to address life challenges
21. I enjoy the small things in life – such as taking a shower, brushing my teeth or eating
22. I am driven and ruled by fears
23. I tend to think about the future or the past without attending to the present moment
24. My life is a gift, and I try to make the most of each moment
25. I draw on my compassion in my encounters with others
26. I am limited in my life by the feeling that I have very few options available to me
27. I spend time in nature to remind myself of the bigger picture
28. My actions are aligned with my values
29. In meetings or conversations, I pause several times to step back, observe and reassess the situation
30. I use objects or places as reminders to align myself with what is sacred
31. I find it hard to go against conventions, expectations or rules

32. Even when things are upsetting and chaotic around me, I remain centred and peaceful inside
33. I find it upsetting to imagine that I will not achieve my desired outcomes
34. In my day-to-day tasks, I pay attention to that which cannot be put into words, such as indescribable sensual or spiritual experiences
35. I am aware of a wise- or higher-self in me that I listen to for guidance
36. I can hold as true and integrate seemingly conflicting or contradictory points of view
37. I strive for the integration or wholeness of all things
38. My work is in alignment with my greater purpose
39. I derive meaning from the pain and suffering in my life
40. I feel that my work is an expression of love
41. I use rituals, rites or ceremonies during times of transition
42. My actions are aligned with my soul – my essential, true nature
43. I remember to consider what is unspoken, underground or hidden
44. Because I follow convention, I am not as successful as I could be
45. I am aware of my inner truth – what I know inside to be true
46. Being right is important to me
47. I notice and appreciate the sensuality or beauty of my daily life
48. I enhance my effectiveness through my connections and receptivity to others
49. Even in the midst of conflict, I look for and find connection or common ground
50. I listen to my gut feeling or intuition in making important choices
51. I listen deeply to both what is being said and what is not being said
52. I am mindful of my body's five senses during my daily tasks
53. I seek to know what is logically provable and ignore the mysterious
54. I look for and try to discover my blind spots
55. I have a hard time integrating various parts of my life
56. I work toward expanding other people's awareness and perspectives
57. I live in harmony with a force greater than myself – a universal life force, the divine, nature – to act spontaneously and effortlessly
58. My goals and purpose extend beyond the material world
59. I draw on deep trust or faith when facing day-to-day challenges
60. I hold resentment toward those who have wronged me
61. I feel like part of a larger cosmic organism or greater whole
62. I find ways to express my true self creatively
63. When looking at others, I tend to focus on what they need to do to improve
64. Experiences of ecstasy, grace or awe give me insights or direction in dealing with daily problems
65. To gain insights in daily problems, I take a wide view or holistic perspective
66. I have daily and weekly times set aside for self-reflection and rejuvenation
67. I remember to feel grateful for the abundance of positive things in my life
68. I have faith and confidence that things will work out for the best
69. I accept myself as I am, with all my problems and limitations
70. To solve problems, I draw on my ability to hold, accept and go beyond paradoxes
71. In my daily life, I feel my work is in service to the larger whole
72. In arguing or negotiating, I am able to see things from the other person's perspective, even when I disagree
73. I see advancing my career as the main reason to do a good job
74. I see financial rewards as being the primary goal of my work

- 75. My mind wanders away from what I am doing
- 76. I am frustrated by my inability to find meaning in my daily life
- 77. Even when I seem to have very few choices, I feel free
- 78. I want to be treated as special
- 79. I have a hard time standing firm in my inner truth – what I know inside to be true
- 80. I bring a feeling of joy to my activities
- 81. I strongly resist experiences that I find unpleasant
- 82. I am my own worst enemy
- 83. I have answered all the questions truthfully and to the best of my ability

Appendix 2

| Group | Age | Year | Gender |
|-------|-----|------|--------|
| G | | | |

Life Perspectives scale

Clarification of terms

Statement 5) 'opening myself' – keeping in a receptive state of mind

Statement 6) 'nonconformity' – behaving in a manner different to most other people

Statement 14) 'cyclical' – current events/actions impact other aspects of my life through consequences

Statement 14) 'linear' – events/actions have no influence beyond the event/action itself

Statement 19) 'sacred' – spiritual or loved

Statement 30) 'sacred' – spiritual or loved

Statement 34) 'sensual' – felt through the senses

Statement 65) 'holistic' – big picture or all-encompassing

Statement 70) 'paradoxes' – seemingly conflicting information or events

- 1 – Never or almost never
- 2 – Very infrequently
- 3 – Fairly infrequently
- 4 – Fairly frequently
- 5 – Very frequently
- 6 – Always or almost always

| | | 1 | 2 | 3 | 4 | 5 | 6 |
|----|---|---|---|---|---|---|---|
| 1 | I notice and appreciate the beauty that is uncovered in the things I do | | | | | | |
| 2 | I expect the worst in life and that is usually what I get | | | | | | |
| 3 | When things are chaotic, I remain aware of what is happening without getting lost in my experience | | | | | | |
| 4 | During an activity or conversation, I am aware of my thoughts and emotions | | | | | | |
| 5 | I practice inner and outer quiet as a way of opening myself to receive creative insights | | | | | | |
| 6 | I have a good sense for when my purpose requires nonconformity, beyond-the-square thinking or taking an unpopular stand | | | | | | |
| 7 | I resist events that I do not like, even when they need to occur | | | | | | |
| 8 | In my daily life, I feel the source of life to be inherently divine and present within the physical world | | | | | | |
| 9 | I get upset when things do not go the way I want them to go | | | | | | |
| 10 | In my day-to-day activities, I take care to ensure that what I do is consistent with what I feel 'should' happen in the world | | | | | | |
| 11 | I find it frustrating when I do not know what the truth is | | | | | | |
| 12 | I pay attention to my dreams to gain insight to my life | | | | | | |
| 13 | In my daily life, I am disconnected from nature | | | | | | |
| 14 | Seeing life's processes as cyclical rather than linear gives me useful insights into daily challenges | | | | | | |
| 15 | A higher consciousness reveals my true path to me | | | | | | |
| 16 | I live and act with awareness of my mortality | | | | | | |
| 17 | In difficult moments, I tap into and draw upon stories, quotes, teachings or other forms of time-proven wisdom | | | | | | |

18. I do not know how to just be myself in interactions with others
19. I hold the things I do as sacred
20. I have a daily spiritual practice – such as meditation or prayer – that I draw on to address life challenges
21. I enjoy the small things in life – such as taking a shower, brushing my teeth or eating
22. I am driven and ruled by fears
23. I tend to think about the future or the past without paying attention to the present moment
24. My life is a gift, and I try to make the most of each moment
25. I draw on my compassion in my encounters with others
26. I am limited in my life by the feeling that I have very few options available to me
27. I spend time in nature to remind myself of the bigger picture
28. My actions are in line with my values
29. In meetings or conversations, I pause several times to mentally step back, observe and reassess the situation
30. I use objects or places as reminders to align myself with what is sacred
31. I find it hard to go against conventions, expectations or rules
32. Even when things are upset and chaotic around me, I remain centred and peaceful inside
33. I find it upsetting to imagine that I will not achieve my desired goals
34. In my day-to-day tasks, I pay attention to things that cannot be put into words, such as indescribable sensual or spiritual experiences
35. I am aware of a wise- or higher-self in me that I listen to for guidance
36. I can believe and accept seemingly conflicting or contradictory points of view
37. I strive for the integration or wholeness of all things
38. The things I do are in line with my greater purpose
39. I derive meaning from pain and suffering when it occurs in my life
40. I feel that the things I do are an expression of love
41. I use rituals, rites or ceremonies during times of change in my life
42. My actions are aligned with my soul – my essential, true nature
43. In conversation, I remember to consider what is unspoken, underground or hidden
44. Because I keep within society's expectations, I am not as successful as I could be
45. I am aware of my inner truth – what I know inside to be true
46. Being right is important to me
47. I notice and appreciate the sensuality or beauty of my daily life
48. I enhance my effectiveness through my connections to and acceptance of others
49. Even in the midst of conflict, I try to find connection or common ground
50. I listen to my gut feeling or intuition in making important choices
51. I listen deeply to both what is being said and what is not being said
52. I am aware of my body's five senses during my daily tasks
53. I seek to know what is logically provable and ignore the mysterious
54. I look for and try to discover my blind spots
55. I have a hard time integrating various parts of my life
56. I work toward expanding other people's awareness and perspectives
57. I live in harmony with a force greater than myself – for example, a universal life force, the divine, nature – to act spontaneously and effortlessly

58. My goals and purpose extend beyond the material world
59. I draw on deep trust or faith when facing day-to-day challenges
60. I hold resentment toward those who have wronged me
61. I feel like part of a larger cosmic organism or greater whole
62. I find ways to express my true self creatively
63. When looking at others, I tend to focus on what they need to do to improve
64. Experiences that inspire awe or wonder give me insights or direction for dealing with daily problems
65. To gain insights into daily problems, I take a wide view or holistic perspective
66. I have daily and weekly times set aside for self-reflection and rejuvenation
67. I remember to feel grateful for the abundance of positive things in my life
68. I have faith and confidence that things will work out for the best
69. I accept myself as I am, with all my problems and limitations
70. To solve problems, I draw on my ability to hold, accept and go beyond paradoxes
71. In my daily life, I feel that the things I do are in service to the larger whole
72. In arguing or negotiating, I am able to see things from the other person's perspective, even when I disagree
73. The main reason to perform well in school is to advance my future career options
74. I see financial rewards as being the primary goal of my education
75. My mind wanders away from what I am doing
76. I am frustrated by not being able to find meaning in my daily life
77. Even when I seem to have very few choices, I feel free
78. I want to be treated as special
79. I find it hard to stand firm in my inner truth – what I know inside to be true
80. I bring a feeling of joy to my activities
81. I strongly resist experiences that I find unpleasant
82. I am my own worst enemy
83. I have answered all the questions truthfully and to the best of my ability

(Based on the original ISIS scale developed by Amram & Dryer, 2008)

Appendix 3

10 February 2012

Dear Parent(s)/caregiver(s)

Your child has been invited to participate in a research project conducted by the University of Wollongong. The project is entitled ***Precursor, indicator or mirage: What depth of relationship exists between spiritual intelligence and giftedness?*** For this research, spiritual intelligence is defined as the application of personal spiritual perspectives, while giftedness is the ability to perform above the average in a particular field. Each of the participating schools represents a different demographic of giftedness. The study makes no attempt to link spiritual intelligence with religious orientation and will not gather religious data.

We would like your approval to conduct the research and to involve your child as a participant, as part of a total survey population of approx. 500 students across three high schools. Your child will be asked to undertake a proforma, 83-item, paper-based survey, which should take approx. 30 minutes. Sample statements are: 9) I get upset when things do not go the way I want them to go; 28) My actions are in line with my values; 69) I accept myself as I am, with all my problems and limitations. Responses take the form of a 1–6 rating. The survey has been designed and validated as a measure of an individual's spiritual intelligence.

Your child's involvement in the study is voluntary and he/she may withdraw from the study at any time, however, as the surveys are anonymous, it will not be possible to identify and withdraw any data that has been provided to that point. If you do not want your child to take part in this research, non-consent forms are available from the school office or you may contact the school principal (xxxx@det.nsw.edu.au) directly.

This study will form the basis for Russell Walton's PhD thesis. If you decide to help us in this study, you will provide us with valuable information on the relationship between spiritual intelligence and giftedness. Findings from the study will be published in a report to the NSW Department of Education and Communities (DEC), as well as possible publication in educational journals and conference proceedings. Confidentiality is assured, and your child will not be identified in any part of the research or reportage.

This study has been reviewed by the Human Research Ethics Committee (Social Science, Humanities and Behavioural Science) of the University of Wollongong. This research has been assessed by the DEC as presenting minimal risk, however, should your child become distressed they will be referred to the school counsellor. If you have any concerns or complaints regarding the conduct of this research, you can contact the Ethics Officer, on (02) 4221 3386.

Yours sincerely

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