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Creativity and Flow Theory: Reflections on the Talent Development of Women

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Introduction

A number of years ago, Wilma was part of the organising committee when the University of Wollongong in New South Wales hosted the Australian Psychological Society's annual conference. We invited students to submit entries into an art contest that addressed the theme of the conference, 'Why Psychology?'. We had invited two experts from the City Art Gallery to select the winning entry. In awarding the first prize, one of the judges said that he had selected the artwork after being told that the two melted-plastic masses that were a focal part of the piece had originally been a Ken and a Barbie doll. For Wilma, a self-confessed non-artist, this raised an important question, which was whether the artwork would still have gained first place if the judge had not known the original source of the melted plastic. In other words, was the creativity inherent in the piece itself or was additional information required to appreciate its creative contribution? (Vialle, Lysaght, & Verenikina, 2000).

As a former drama teacher, Wilma had often struggled with articulating the differences among the creative works of her students, to identify which pieces were bare pass-grade standard while others were of outstanding quality. She readily came to the conclusion that it was far easier to recognize creativity than it was to define it. While there has been a burgeoning interest in creativity research since Guilford's exhortation in 1950, it remains an area that is under-researched. Sternberg and Lubart (1999) highlighted this situation with their observation that "few resources have been invested in the study of creativity, relative to its importance both to the field of psychology and to the world" (p. 12). This chapter seeks to add to current creativity theory and research by exploring a relatively silent voice in the literature, which is the perspective of the creative woman. We draw, particularly, on case studies of six creative women from diverse domains who were participants in Margaret's doctoral research (Botticchio, 2006).

The status of creativity theory

Our current research on creativity owes much to the specific contributions of creativity researchers, who helped us to understand much of the psychology of the creative personality. Howard Gruber's approach to the study of creativity entailed intensive case studies of highly creative individuals drawn from different domains (Gruber, 1981). His case histories of individuals such as Charles Darwin allowed him to map the trajectory of creative development as well as to demonstrate how the processes involved in creativity unfold within specific domains. Dean Keith Simonton's (1984, 1990) historiometric approach imposed quantitative measures on the biographies of creative people in a range of disciplines. Consequently, he was able to demonstrate the role of the political and social milieu on creativity in the disciplines of science, philosophy, music and literature (Simonton, 1984). Among his conclusions, Simonton observed that there was often a significant increase in scientific advances following the fall of empires. Further, the historiometric derived from creative scientists illustrated that they could be characterized by dedication to their work and that their creative output followed a predictable age pattern, which started in their twenties, peaked in their thirties and forties, and diminished in later life (Simonton, 1990).

The influence of Gruber and Simonton, in shifting creativity research from individual traits to the broader contexts in which they are expressed, is evident in the work of Mihaly Csikszentmihalyi, Howard Gardner and David Feldman, individually and collectively. It is their research that forms the framework for the research reported in this chapter. The reader is asked to consider the following definitions:

Gardner (1993) defined the creative individual as one "who regularly solves problems, fashions products, or defines new questions in a domain in a way that is initially considered novel but that ultimately becomes accepted in a particular cultural setting" (p. 35).

David Feldman defined creativity as "the purposeful transformation of a body of knowledge, where that transformation is so significant that the body of knowledge is irrevocably changed from the way it was before....This notion of creativity emphasizes high-level functioning brought to bear on specialized problems" (Feldman, 1994, p. 86).

Mihaly Csikszentmihalyi (1996) stated that “creativity results from the interaction of a system composed of three elements: a culture that contains symbolic rules, a person who brings novelty into the symbolic domain, and a field of experts who recognize and validate the innovation” (p. 6).

These three definitions illustrate the tripartite division of creativity that the collaboration of the three researchers has provided to the literature. Gardner’s individual work focused on the creative *person*; Feldman studied the role of *domains* in the development of creativity; and, Csikszentmihalyi was concerned with the social contexts, or the *field*, in which creativity was expressed (Feldman, Csikszentmihalyi, & Gardner, 1994). The combination of these three elements, person, domain and field, is encapsulated in Csikszentmihalyi’s definition above.

A contextual theory of creativity

Csikszentmihalyi’s interest in the social context of creativity was evident in the outcomes of an early study of creative artists. He examined the lives of a number of artists associated with early fourteenth century Florence and found that the social milieu of that time and place was a critical element in the quality of their artistic output. Csikszentmihalyi (1988) concluded that the existence of wealthy patrons, competitions, awards and commissions attracted artists to the area, initially, resulting in a vibrant community that further stimulated high levels of artistic expression.

In his publication, *Creativity*, Csikszentmihalyi (1996) draws on his extensive research to explicate his contextual theory of creativity. The book draws most heavily on the research he conducted between 1990 and 1995 in which he interviewed 91 highly-accomplished creators from a range of disciplines. Among the luminaries included in the research were Ravi Shankar, Jonas Salk, Eugene McCarthy, Madeleine L’Engle and Edward Asner. The 91 interviewees were those who agreed to participate from the 275 invitations that Csikszentmihalyi had issued. Refusal to participate was more common among the artists than the scientists and Csikszentmihalyi reports that even the refusals were illuminating. He cites the response from Saul Bellow’s secretary: “Mr Bellow informed me that he remains creative in the second half of life, at least in part, because he does not allow himself to

be the object of other people's 'studies'. In any event, he's gone for the summer" (Csikszentmihalyi, 1996, p. 13).

Csikszentmihalyi's contextual model of creativity poses the question "Where is creativity?" rather than the more usual "What is creativity?". In so doing, he focuses on the dynamic interaction between the individuals and their sociocultural contexts. Consequently, creativity lies in the interrelationships occurring within a system made up of a domain, a field and a person, as illustrated in Figure 1.

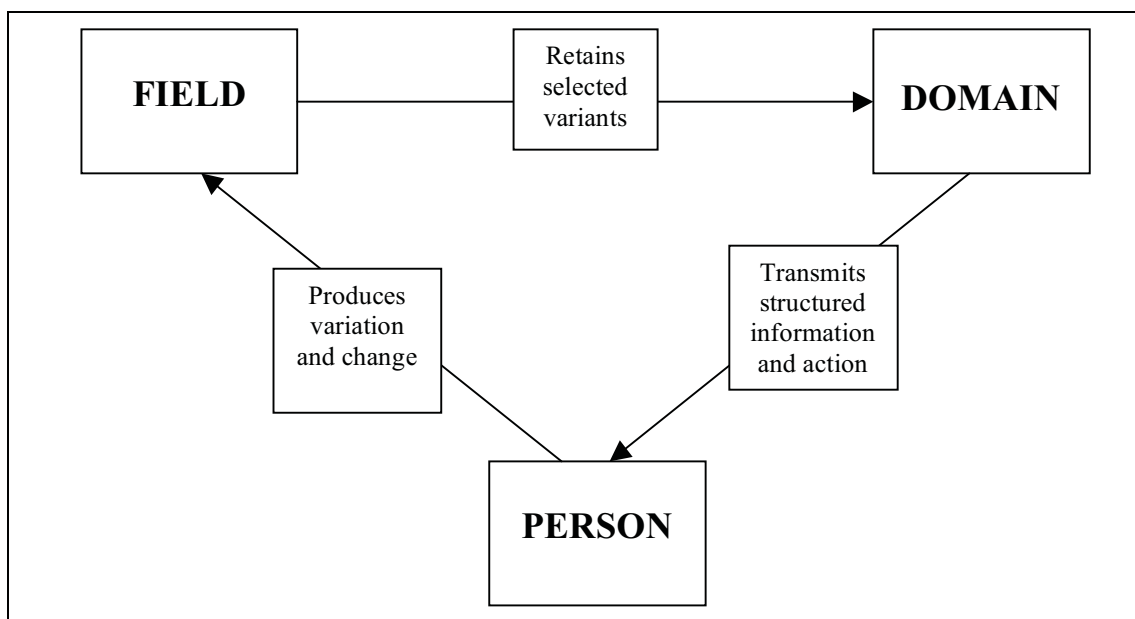


Figure 1. Csikszentmihalyi's depiction of the roles of domain, person and field in creativity. Adapted from Csikszentmihalyi, 1988, p. 329.

Another concept that derived from Csikszentmihalyi's work was *Flow*, which he described as the feeling of intense concentration and enjoyment that people experience when they work on a satisfying task. He defined flow as "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi, 1990, p. 4). Flow is evident in the work habits of those who make significant creative contributions.

Csikszentmihalyi's contextual theory of creativity derived from studies of eminent creators. Therefore, we may question whether it also captures the creativity we assign to children's play and discovery or to the everyday creativity we employ when we transform the meagre offerings in our pantry into a gourmet meal. Csikszentmihalyi (1996) attempted to resolve this definitional divide by distinguishing between two types of creativity, which he labelled *little c Creativity* and *big C Creativity*. He describes big C Creativity as the kind of creativity that makes a difference to our lives in that it alters domains and the ways that ideas and products can come to fruition within those domains. By definition, then, big C Creativity is the realm of the eminent individual, the innovator or inventor in a particular domain. Little c creativity, by contrast, is everyday creativity that is part of the human condition and distinguishes us from other species. Therefore, it is also the creativity that we observe in young children as they explore, invent and discover. While these two forms of creativity are distinctive, Csikszentmihalyi (1996) believes that study of big C Creativity will provide insights that are useful for the enhancement of little c creativity.

Limitations of the contextual theory

While the contextual theory proposed by Csikszentmihalyi, Gardner and Feldman is an important contribution to the literature, there are some limitations from our perspective. Foremost among these limitations is the relative absence of women in the studies completed by Csikszentmihalyi (1996) and Gardner (1993) respectively. Their approaches to researching creativity have drawn heavily on case study methodology but for various reasons have included relatively few women. Csikszentmihalyi's study of 91 eminent creators, for example, included only 27 women, more than half of whom were involved in domains associated with the Arts and Humanities. There were only nine female scientists and three female business or political figures in the sample.

Gardner's (1993) publication examined seven creative individuals and included only one woman, Martha Graham from the domain of dance. Gardner's assertion that his seven individuals represent a "representative and fair sample" (1993, p. 6) of those innovators who have shaped the modern era, presumably reflects the degree of recognition of women when traditional measures of eminence are utilized. In discussing the inclusion of the sole woman in his treatise, Gardner (1993)

acknowledged that Graham “faced obstacles stemming from prevalent attitudes and expectations in a male-dominated creative world” (p. 12).

It seems that the stories of women are largely absent from “his’ tory” (Nochlin, 1989), although one exception is Ravenna Helson’s (1983) study of creative women mathematicians. Despite the advances made for women since the mid-twentieth century, women are still under-represented and under-valued for their creative accomplishment. Arnold, Noble and Subotnik’s (1996) publication, *Remarkable Women*, for example, presents a picture of women marginalized for their talent. The absence of women in creativity research is as problematic for a comprehensive theory of creativity as the earlier absence of women’s perspectives were for Kohlberg’s theory of moral development as challenged by Gilligan (1982).

What explanations can be given for the absence of women in studies of eminent creators? The framework proposed by Csikszentmihalyi and his colleagues suggests that this could occur at the site of the individual, the domain or the field. At the level of the individual, we need to consider whether there are qualities unique to female creators that need to be incorporated in current theories. But individuals work within domains. Gardner (1993) stated that “all creative work occurs in one or more domains. Individuals are not creative (or noncreative) in general; they are creative in particular domains of accomplishment, and require the achievement of expertise in these domains before they can execute significant creative work” (p. 145). Other writers have also commented on the relationship between creative talent and domain expertise (see, for example, Amabile, Phillips, & Collins, 1994). Nevertheless, it is clear that domains are valued in different ways and this may contribute to the relative neglect of women’s creativity.

At the level of the field, women’s experiences of creativity may be overlooked because the field adopts a particular view of expertise that privileges the male-dominated view of success. The significance of the field’s judgemental power is the oft-cited Van Gogh, whose work was not appreciated in his own lifetime but came to the fore when the field was more ready to accept his innovations. But the field also has a role in nurturing new creators. Gardner’s view of field membership has an age dimension in that he depicts the ageing creator turning critic and teacher when “his”

ability to innovate declines. Women's involvement in field roles may well challenge this model but, simultaneously, provide another explanation for their under-representation in that field responsibilities distract individuals from their creative work.

Method

The purpose of this research, then, was to provide a voice to creative women and consider how their experiences could inform the contextual theory of creativity. To this end, multiple case studies of six women at different ages and from different domains were conducted. The data for the case studies were obtained from two lengthy semi-structured interviews per person. The prompt questions were based on those used by Csikszentmihalyi (1996) and pursued three broad topics: establishing a career over the course of a lifetime; personal and professional relationships; and, working habits and insights. Despite the prompt questions, interviewees were encouraged to take the conversations where they wanted, to allow them to tell their own story as far as possible.

The sample for the study was both convenient and purposively selected. The location of each of the participants was in New South Wales, the most populous state of Australia and in close proximity to Sydney, the largest city. The selection of different domains was deliberate and ranged across science, the arts, and politics as included in Csikszentmihalyi's study but also included the nascent domain of food preparation. The age of participants varied, with the youngest at 29 and one participant from each decade thereafter. This was not deliberate but a serendipitous outcome of the domain selection process. A snapshot of the six case studies (pseudonyms have been used) is presented in Table 1.

Table 1. Overview of the case studies

<i>Name</i>	<i>Age</i>	<i>Domain</i>	<i>A representative comment</i>
Karla	29	Science (biology and chemistry)	"I am very individualistic and I also have this creative side but I also have this analytical side....I have always wanted to do something that would make a difference....it is in between disciplines which lead to creative solutions....By being in two disciplines rather than one...I can essentially draw on a greater range of knowledge

and a much greater range of tools to come up with more creative solutions than...if I had been in either one of those disciplines. What I have done is put myself in this position.”

Wanda	38	Chef who owns and runs a restaurant business	“Okay, you know why Australia’s got the best chefs in the world? We have an extremely multicultural community...and we have these flavours being brought from Asia to European to Slavic....There’s no boundaries to cooking, to culture.”
Willa	43	Psychology Politics	“I guess I am creative in a constipated way....I was good at everything...in an academic way but I think my gift was with people....I think I understand people, what makes them tick. I think I stumbled on the right thing.”
Anna	59	Dance Television entertainment	“Joe Latona...heard us sing and he said, ‘I’d like you to try this movement’ and I can remember it as if it were yesterday. We were in this little room and he showed us this step and we all did it as a group...and it was such a high because suddenly here was someone who understood what we were about. It had never been done before.”
Connie	69	Music Visual arts Teaching	“I just know now that I’m getting older [and] at last starting to understand what I should have done and how I should have done it in my life....I’ve always been driven...creating what I did at school ensembles and bands and orchestras, all of that is still manipulating music and making something that hadn’t happened before. So that was the way I could make teaching interesting for me.”
Delice	79	Painting Weaving	“A lot of artists like to go outside to paint what they see but I think I’ve got a world within me that I want to make visual....[C]reativity to me means that I want to express what’s in my inner world...it’s very positive to me and it has a glow about it and there’s always so much hope and joy in it and it’s that that’s kept me going and naturally I have to express it in colour.”

Results and Discussion

The interviews were transcribed and coded to extract themes that were common across these diverse women's stories (see Botticchio, 2006, for detailed stories of each woman). The analysis produced 20 common themes that have been organized into the three sites delineated by Csikszentmihalyi: domain, field and person.

Domain

Five themes were identified at the site of the domain:

1. All participants express their achievements in terms of domain success and personal attainment.
2. All participants made a connection with more than one domain.
3. They are drawn to domains though their interest in what they do as domain work and to fulfil personal responsibilities.
4. They aim for a balance between their domain work and private lives but it often remains skewed toward work, despite efforts to change it.
5. They are tied to a duality of reward and motivation. The enjoyment they exact from domain work is measured against the satisfaction of fulfilling personal obligations.

In common with their male counterparts, the women were strongly attracted to a domain and experienced flow as they completed work within the domains. But there are also some points of departure. Each of the participants valued their personal lives, particularly partners and families, alongside the domain that was their passion. Further, much of the flow they experienced in their work was made possible by those personal relationships. Karla, the young scientist, commented: "I think the quality of my science will always benefit from having a partner and a home and security and happiness. My science is my life in many ways but it is not what gives me happiness."

Karla's age has perhaps given her an opportunity to balance her professional and personal lives in a way that was not readily available to the older women in the study. Anna, for example, gave up her career as a dancer and entertainer in order to have a family. She later returned to teaching in the domain, thereby adopting a field role, when her daughter began to dance. Connie works as a teacher in the domain in order

to support herself and her daughter. She resents not being able to devote herself more fully to the domain but considers she has no choice. Delice has experienced a second start in her artistic domain after raising a family. But her domain success masks her own perceptions of personal failure in the unsatisfactory relationship she has with her sons.

The women in our study blur the boundaries of big C and little c creativity in their attempts to balance the dualities of family and career. In this respect, they confirm Gabor's (1995) observation that marriage and family define success for women. These women's experience of domain also stands in stark contrast to Gardner's creators who were "so caught up in the pursuit of their work mission that they sacrificed all, especially the possibility of a rounded personal existence" (Gardner, 1993, p. 44).

Field

At the site of the field, five themes were identified, as follows:

1. They have strong moral and social interests that direct them to the domain.
2. They find people who stimulate their thinking and attitude to work. They learn from a wide group of people with whom they have social contact.
3. They practise field skills of promoting and evaluating the domain. In relation to teaching, they say it is important but takes energy and time they would rather put into the domain.
4. Most participants evaluated others throughout their career.
5. They reflect on family and childhood as the source of support for their creative careers.

Gardner's description of the field site differs dramatically from our participants' experiences. He described his subjects as "intensely competitive individuals who saw—and labelled—many others as rivals. They doggedly protected their territory, divided the world into supporters and enemies, proved quick to reward loyalty and to punish apparent disloyalty....Each had an ensemble of followers who did their bidding, and neither welcomed close colleagues perhaps because they felt that few of their domain peers were their equals" (Gardner, 1993, pp. 377-378).

By contrast, for our female creators, the relationship dimension contains both ethical and moral elements. At times, this ethical element draws them to adopt field roles that interrupt or deflect their domain accomplishments. A characteristic of all our women was the absence of expert mentors early in their careers who shaped their careers. For example, in each case, parental influence was largely non-expert but nevertheless encouraged creativity in various ways. Instead, our creative women sought support and stimulation from a broad range of people within the field.

Further, the women held a more inclusive perception of the field. For example, they felt the need to address non-expert audiences with their work. Karla talked about the importance of revealing science discoveries to the general public and tried to balance academic publication with more “useful” dissemination of her work.

Finally, the participants often adopted a field role in addition to the domain role – four of the six case studies were teachers in the domain and thereby contributed to the nurture of future innovators in the domain. Even our youngest participant, Karla, was involved in teaching at the university level. However, as previously noted, the adoption of field roles early in the career trajectory interferes with innovation. Gardner (1993) noted that his predominantly male subjects only adopted field roles once their innovations declined with age.

Person

The remaining ten themes can be attributed to the site of the person, and include the following:

1. The women turn what is perceived as obstacles to creative achievement into personal advantage.
2. They advise others to choose a domain that they love and enjoy working within it.
3. They were stimulated by an early ‘real world’ project that enabled them to see the complexity of the domain and a taste of success.
4. Advice for young people in their domain:
 - a. Expose yourself to leading ideas in the field.
 - b. Achieve mastery of the domain’s symbol systems.
 - c. At times, working on the periphery of a domain is advantageous.

- d. Find your own identity within a domain and stick to it.
5. Common features in their personal experiences:
 - a. Experience of crisis, trauma and/or depression.
 - b. Heightened emotions as part of their work.
 - c. Emotional displays outside of work.
 - d. High degree of moral or ethical concern for others.
 - e. Experience of times when work was not possible.
 - f. Intense stress from desire to balance work and personal responsibilities.
 6. Most women have noticed differences between men and women in the ways they regard and work in the domain. This has included gender clashes.
 7. Most experience excitement in their work.
 8. Most have experienced a paradigm shift and have been thus affected in their work.
 9. Common characteristics:
 - a. Blurring of genres.
 - b. Attacking established traditions.
 - c. Moral reasoning.
 - d. Cynicism.
 - e. Manipulating new technologies.
 - f. Humor that verges on satire.
 - g. Deconstructing historical accounts.
 10. Common work habits:
 - a. They trust their instincts.
 - b. They think about their work while doing other things.
 - c. They have perfectionist tendencies.
 - d. They have experience of working as a member of a team.

At the site of the person, our participants share many of the characteristics of the big C creators described by Csikszentmihalyi and Gardner. The differences are more a matter of degree than substance. In particular, the valuing of ethical behavior, collaborative relationships and emotions are more embedded in their professional lives than is evident in Csikszentmihalyi's and Gardner's accounts.

Conclusion

This examination of the lives of six creative women, crossing generations and domains, has confirmed the value of the contextual theory of creativity developed by Csikszentmihalyi, Gardner and Feldman. Many of the experiences of our participants bear similarity to the accounts those researchers present of eminent creators. But our participants also experienced creativity in ways that differ markedly from those accounts. We propose, therefore, that a comprehensive theory of creativity needs to allow for the broader experiences represented by our women, particularly in the ways that eminence is assessed.

The three key findings arising from this research may be summarized as follows:

1. At the domain site, there is a blurring of boundaries between big C and little c creativity. This is expressed as women move between domain roles and field roles, and as they connect with multiple domains.
2. At the field site, contributions interfere with innovation. This is indicated by the ways our women adopted teaching roles, mentored and critiqued others, and disseminated their work throughout their careers.
3. At the person site, women moved from personal to domain creativity. Unlike Gardner's creators, our women's experience of flow in their work did not require the neglect of the personal; indeed, in Karla's case, her personal relationship enhanced her experience of flow in her scientific innovation.

Our study suggests that the sharp division between big C and little c creativity that Csikszentmihalyi proposed is fine in theory and for individualistic, male-dominated analyses of eminence. But for the women in our study, the blurring of the boundary between the two forms of creativity is important. It suggests that the career trajectory of female creators may not follow the curvi-linear pattern accepted for their male counterparts. Therefore, the unidirectional cycle of the contextual theory of creativity needs to be seen as more fluid to accommodate women as they move into field roles earlier and back into domain roles to innovate.

References

- Amabile, T.M., Phillips, E.D., & Collins, M.A. (1994). *Creativity by contract: Social Influences on the creativity of professional artists*. Unpublished manuscript. Waltham, MA: Brandeis University.
- Arnold, K., Noble, K., & Subotnik, R. (Eds.). (1996). *Remarkable women: Perspectives on female talent development*. Cresskill, NJ: Hampton Press.
- Botticchio, M. (2006). *Creativity under the glass ceiling: A study using a contextual theory of creativity as a framework*. PhD thesis, University of Wollongong. Available at <http://ro.uow.edu.au/theses/606>.
- Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. J. Sternberg (Ed.), *The nature of creativity: Contemporary psychological perspectives* (pp. 325-339). New York: Cambridge University Press.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Perennial.
- Csikszentmihalyi, M. (1996). *Creativity*. New York: Harper Collins.
- Feldman, D. H. (1994). Creativity: Proof that development occurs. In D. H. Feldman, M. Csikszentmihalyi, & H. Gardner (Eds.), *Changing the world. A framework for the study of creativity* (pp. 85-101). Westport, CT: Praeger.
- Feldman, D. H., Csikszentmihalyi, M. & Gardner, H. (1994). *Changing the world. A framework for the study of creativity*. Westport, CT: Praeger.
- Gabor, A. (1995). *Einstein's wife: Work and marriage in the lives of five great twentieth-century women*. New York: Penguin Books.
- Gardner, H. (1993). *Creating minds*. New York: Basic Books.
- Gilligan, C. (1982). *In a different voice*. Cambridge, MA: Harvard University Press.
- Gruber, H. (1981). *Darwin on man*. Chicago: University of Chicago Press.
- Guilford, J.P. (1950). Creativity. *American Psychologist*, 15, 444-454.
- Helson, R. (1983). Creative mathematicians. In R. Albert (Ed.), *Genius and eminence: The social psychology of creativity and exceptional achievement* (pp. 211-230). London: Pergamon Press.
- Nochlin, L. (1989). *Women, art and power and other essays*. London: Thames and Hudson.
- Simonton, D. K. (1984). *Genius, creativity, and leadership: Historiometric inquiries*. Cambridge, MA: Harvard University Press.

- Simonton, D. K. (1990). *Scientific genius: A psychology of science*. New York: Cambridge University Press.
- Sternberg, R. J. & Lubart, T. I. (1999). The concept of creativity: Prospects and paradigms. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp 3-15). New York: Cambridge University Press.
- Vialle, W., Lysaght, P. & Verenikina, I. (2000). *Handbook on child development*. Katoomba, NSW: Social Science Press.