

## Boys and Girls in Movement

### Stereotypes and Archetypes - Balancing Gender Needs in Elementary School Movement

by Jeff Tunkey —

You may have noticed the recent popularity of news from the gender front. Books, magazines, newspapers and online news sites seem to be playing up the good news and the bad news about changing gender roles, expectations, and fortunes.

In January 2014, the New York Times carried across two pages a report on the abiding biases parents express in favor of their own sons.<sup>1</sup> Harvard-trained economist and writer Seth Stephens-Davidowitz analyzed google searches and found, among other things, that in the USA for every 10 searches for the phrase “is my daughter gifted?” there were about 25 searches for the phrase “is my son gifted?” For the phrase “is my (blank) overweight?” for every 10 searches for “son” there were 17 for “daughter”. (Because of the nature of google, comparative statistics from past decades are not available.)

News outlets gave prominent play in December 2013, to the results of a groundbreaking brain imaging study by a team of University of Pennsylvania Medical School researchers, led by professor Ragini Verma<sup>2</sup>. “These maps show us a stark difference—and complementarity—in the architecture of the human brain that helps provide a potential neural basis as to why men excel at certain tasks, and women at others,” said Verma. (See more on this research below.)

Many news outlets reported in November - December on a preschool in Sweden that replaces the Swedish pronouns for “him” and “her” in favor of a newly-minted gender-neutral pronoun, “hen”.<sup>3</sup> Time magazine titled its article “In Sweden, Boys Won't Be Boys”.<sup>4</sup> Indeed, the ‘new news’ seems to be how much of this publishing wave focuses on the topic of challenges faced by boys—and maleness in general—in the 21st century. Book titles in this newly popular niche include “The War Against Boys”, “Boys Adrift”, “Men on Strike”, “The Minds of Boys: Saving Our Sons From Falling Behind in School and Life” and many others.

A common love of he-can/she-can tales (and publishers’ love of publishing) may be part of the reason for this shift in focus, but there is much more than a grain of truth behind the rising concern for boys in schools today. Realities include statistics from the U.S. Department of Education,<sup>5</sup> which predicts that by the next decade, 60 percent of college degrees will be earned by females (See Figure 1.); and from the National Honor Society, which states that nearly two-thirds of the high school students it recognizes for academic excellence are female.<sup>6</sup> In the USA and elsewhere, fear seems to be the driver behind many educational changes, leading us down the steps from No Child Left Behind to mandates for a Core Curriculum, taking schools to an ever-narrowing definition of their academic aims and at the same time circumscribing time allotted for, and play activities allowed in, the classroom, gym and schoolyard.

Without question, we can only feel relief that millennia of unrelenting female disempowerment (to say the least)

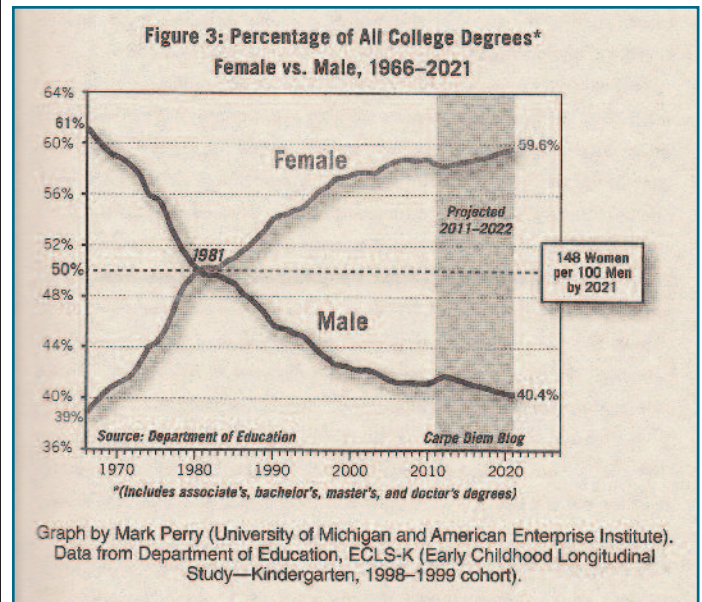


Figure 1  
The ratio of college degrees – a reversal over 70 years.

are finally being stepped back in many areas. It subtracts nothing from this feeling to suggest that in the light of the above it may be necessary to take stock of the latest attitudes and see what might need to be re-balanced. Let us consider: are there learning-style differences between boys and girls? And if so, might the academic ascendance of girls be, to some degree, the result of changes in 'mainstream' educational approaches during recent decades... are schools now, in general, more suited to girls' learning styles, and less suited to boys'? Has there been a downside to the rightful movement to empower girls, such that typical 'boy behavior' has been in some circles defined as a problem to be disciplined away? I think many teachers would answer "yes!" to these questions. And finally, what is the situation in our Waldorf schools? Is it more balanced?

I believe that boys and girls do have different developmental movement needs, needs that should be addressed in our Waldorf classrooms, schoolyards and games classes; that while boys and girls have many developmental-movement needs in common, there are also important differences in the ways they use movement to structurally organize their perception of and contact with the world. My goal in writing is to review perspectives on this vital topic, from a number of informative sources; to see how these seemingly disparate sources might be connected; and, I hope, to inspire further research and discussion at your school.

### Differences Indicated by Rudolf Steiner

During a cycle of eight lectures he gave to teachers in Stuttgart in June 1921,<sup>7</sup> Rudolf Steiner devoted himself to the topic of differences between boys and girls. His comments on how these should be addressed during the elementary years were quite general:

*We must consider the differences between girls and boys in our education leading up to this age [i.e., leading up to adolescence]. We must make the effort to develop the girls' moral and ethical feelings in a way that they are directed toward the aesthetic life. We must take special care that the girls especially enjoy the moral, the religious, and the good in what they hear in the lessons. They should take pleasure in the knowledge that the world is permeated by the supersensible. ... In regard to boys, it will be necessary to provide them with ideas and mental pictures that tend toward*

*strength and affect the religious and ethical life. With girls, we should bring the religious and moral life to their very eyes, while with boys we should bring the religious and beautiful predominantly into the heart, the mind, stressing the feeling of strength that radiates from them.*

And about movement:

*...we should encourage the inner experience the children's physical nature asks for in other areas—in the movements of arms and legs, in running, and so forth... But this kind of physical education should be based on the development of movements not from the mere experience of the physical/corporeal but rather from the experience of soul and spirit, by letting the children adapt the physical/corporeal to their experiences.*

I haven't found specifics given by Steiner on addressing gender differences in the early childhood or elementary school settings. However, the fifth lecture in Education for Adolescents does provide us with guiding thoughts for middle school and beyond. Permit me to offer a few samples:

*What we see initially is that the astral body has a stronger influence in girls than in boys. Throughout life the astral body of women plays a more important role than that of men. The whole of the female organism is organized toward the cosmos through the astral body. Much of what are really cosmic mysteries is unveiled and revealed through the female constitution. The female astral body is more differentiated, essentially more richly structured, than that of the male. Men's astral bodies are less differentiated, less finely structured, coarser.*

*If we bear in mind these differences between boys and girls we shall understand that the blessing of coeducation allows us to achieve much by a tactful treatment of both sexes in the same room. A conscientious teacher who is aware of his or her tasks in approaching such a coeducational situation will still differentiate between girls and boys.*

*Naturally, we must not take these things to an extreme, should not think of making the girls into aesthetic kittens that regard everything merely aesthetically. Nor should the boys be made into mere louts, as would be the inevitable result of their egotisms being engendered through an unduly strong feeling of*

*their strength—which we ought to awaken, but only by connecting it to the good, the beautiful, and the religious. We must prevent the girls from becoming superficial, from becoming unhealthy, sentimental connoisseurs of beauty during their teenage years. And we must prevent the boys from turning into hooligans. These dangers do exist. We must know the reality of these tendencies and must, during the whole of elementary education, see to it that the girls are directed to experience pleasure in the beautiful, to be impressed by the religious and aesthetic aspects of the lessons; and we must see to it that the boys are told: “If you do this, your muscles will grow taut, you will become a strong, efficient young man!” The sense of being permeated by the divine must really be kindled in boys in this way.*

In an era when gender/career roles were more stereotyped, Steiner also said that:

*Our curriculum should be such that it allows the children to become practical in life; it should connect them with the world. Our curriculum for the tenth grade class will, therefore, be based on the following: We must, in order to do justice to the social life, have girls and boys together in the room; but we must differentiate by giving them activities suited to their sex. We must not separate them. The boys should watch the girls during their activities and vice versa.*

Since we know from many lectures by Steiner that he considered the astral body to be also the body of movement and emotion (and also the “faith body”<sup>8</sup>) and that he identified the astral body as central to thinking, the above, happily, gives us two quests. First, it provides us with a starting point for further observation and meditation, so that his recorded words become for us more than received wisdom.

Our second quest must be to find a modern-science parallel, not because we need modern science to validate its truth or falseness per se, but rather because when we can find mainstream parallels to anthroposophic findings or concepts, we add to our individual understanding and, even more importantly, strengthen our readiness to communicate with and build bridges to parents and others beyond our classroom walls.

### Differences Demonstrated by Modern Science

The pioneering University of Pennsylvania study mentioned above has shown for the first time that the brains of men and women are ‘wired up’ differently, which could explain some of the stereotypical differences in male and female behavior, scientists have said. Researchers found that many of the connections in a typical male brain run between the front and the back of the same side of the brain, whereas in women the connections are more likely to run from side to side between the left and right hemispheres of the brain. (See Figure 2.)

“On average, men connect front to back [parts of the brain] more strongly than women,” whereas “women have stronger connections left to right,” said Ms. Verma. But

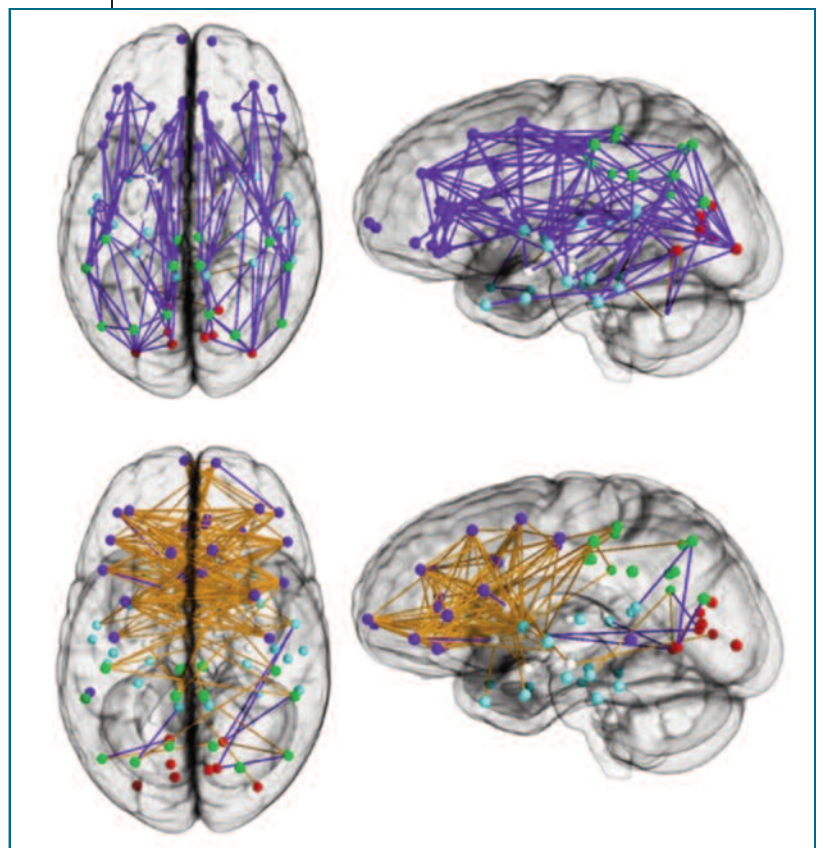


Figure 2. Brain networks showing significantly increased intra-hemispheric connectivity in males (Upper) and inter-hemispheric connectivity in females (Lower). Intra-hemispheric connections are shown in blue, and inter-hemispheric connections are shown in orange.

Credit: Ragini Verma et al, University of Pennsylvania.



she cautioned against making sweeping generalizations about men and women based on the results.

This difference in the way the nerve connections in the brain are ‘hardwired’ is established during adolescence, when many of the secondary sexual characteristics such as facial hair in men and breasts in women develop under the influence of sex hormones, the study found. The researchers believe the physical differences between the two sexes in the way the brain is hardwired could play an important role in understanding why men are in general better at spatial tasks involving muscle control while women are better at verbal tasks involving memory and intuition. Psychological testing has consistently indicated a significant difference between the sexes in the average ability to perform various mental tasks, with men outperforming women in some tests and women outperforming men in others. Now there seems to be a physical explanation.

“These maps show us a stark difference – and complementarity – in the architecture of the human brain that helps to provide a potential neural basis as to why men excel at certain tasks, and women at others,” Professor Verma noted. “What we’ve identified is that, when looked at in groups, there are connections in the brain that are hardwired differently in men and women. Functional tests have already shown that when they carry out certain tasks, men and women engage different parts of the brain.”

The research, which involved imaging the brains of nearly 1,000 adolescents, found that male brains had more connections within hemispheres, whereas female brains were more connected between hemispheres. The results, which apply to the population as a whole and not individuals, suggest that male brains may be optimized for motor skills, and female brains may be optimized for combining analytical and intuitive thinking.

### Differences In Play Stereotypes - Boys

When I’ve asked workshop groups to name or briefly describe stereotypical play of elementary-age boys, it has never taken very long to come to consensus on the phrase “rough and tumble play” – wrestling/tussling activity.

There is considerable research on the topic of rough and tumble play and its connection to social and mental development. In a wonderful book – *The Art of Roughhousing*<sup>8</sup> – that I recommend to all parents of young

children, authors state the following:

*Rowdy, physical, interactive play is by far the most common type of play in the animal kingdom. It occurs in every species of mammal and in many nonmammalian species as well. We’ve all seen videos of lion clubs wrestling, but you’d be amazed by the vast number of species that enjoy rowdy play – elephants, whales, even ants.*

*Play – especially active physical play, like roughhousing – makes kids smart, emotionally intelligent, lovable and likable, ethical, physically fit, and joyful. We’re not exaggerating (much). Roughhousing activates many different parts of the body and brain, from the amygdalae, which process emotions, to the prefrontal cortex, which makes high-level judgements. The result is that every roughhousing playtime is beneficial for body and brain as well as for the loftiest levels of the human spirit: honor, integrity, morality, kindness, and cooperation.*

The authors also assert that roughhousing is not just “for” boys.

*Almost all children love and benefit from roughhousing, but boys engage in rough-and-tumble play much more frequently than girls. ... Of course, many girls roughhouse and many boys don’t. ... Boys as a group tend to tease, shove, and hit more than girls, even when they’re having fun and being friendly. ... Girls, meanwhile, are famous for what is called ‘relational aggression’: cruelty through gossip, dirty looks, or a cold shoulder. ... Roughhousing can in fact help break this mean-girl pattern. ... Through roughhousing, girls learn to be more direct about their feelings.*

There is a continuing growth of attention deficit and hyperactivity diagnoses, especially for boys. Why? It may be partially due to a past under-recognition of the ‘symptom cluster’. I would assert, however, that the increase is largely due to culture shifts, especially perhaps in schools, towards defining typical boy behavior as a problem that must be restricted everywhere, forbidden on the playground, or even seen as evidence of a pathology that it would be appropriate to medicate away.

Fergus Hughes, author of *Children, Play and Development*<sup>9</sup>, states the following in this regard:

*There is a correlation between the appearance of this activity and the maturity of the frontal lobes of the*

*brain. The executive functions of the frontal lobes include reflection, imagination, empathy, and play/creativity, and when these develop, they allow for greater behavioral flexibility and foresight, for well-focused, goal-directed behavior. As the frontal lobes mature, the frequency of rough and tumble play goes down, and damage to the frontal lobes is associated with a higher level of playfulness. In fact, surgical reduction of the frontal lobes of young rats results in an increased level of playfulness and hyperactivity.*

*Whether or not a neural disorder is present, however, findings from animal research suggest that rough and tumble play not only reflects frontal lobe development but also promotes it. In other words, active, energetic, spontaneous physical play may facilitate neurological development.*

### Differences In Play Stereotypes - Girls

When I've asked the same workshop groups to then name or briefly describe stereotypical play of elementary-age girls, it usually takes a little longer to reach a conclusion, but the discussion always leads to "spinning" – i.e. cartwheels, dancing – or the phrase "expressive movement", which covers both gymnastics and dance. Interestingly, Karl König emphasizes that folk dance is an important activity for the development of math capacities.<sup>10</sup>

Googling the phrase "why do boys like roughhousing?" produces over 110,000 results. But while phrases like "why do girls like gymnastics?" (or dance, spinning movement, etc.) produce millions of results, the first several pages of link results, at least, include no pointers whatsoever to developmental reasons for this preference.

### A different way of looking at the polarities

I contend that there is a developmental reason for these typical play characteristics: boys' love of rough-and-tumble, and girls' love of spinning, expressive movement reflect two poles of human growth and perhaps even neurologic organizing. I've reached this conclusion by looking through a sort of "binoculars" that combines ideas from Rudolf Steiner on one side, and on the other side with a gem of an insight from the 20th century physician and therapist Alfred Tomatis. I offer this lens on the polarities of boys' and girls' movement not as a definitive answer to all questions; rather, as a theory I've followed

with some success in my movement program, and as food for thought and research by others as well.

Doctor Tomatis notes that the sensory cells of the inner ear and the tactile cells of the skin have the same origin. According to him, the skin and ear basically evolve from the same embryonic tissue, the ectoderm; thus the skin is differentiated ear, and we listen with our whole body. Tomatis called the ear "the Rome of the body" because almost all cranial nerves lead to it and therefore it is considered our most primary sense organ.<sup>11</sup>

Doctor Steiner indicates that humans have twelve senses; that the four "physical" senses are Touch, Life, Movement and Balance.<sup>12</sup> Isn't it so that in rough and tumble play, the Touch and Life senses are most engaged and affected; and that in expressive, spinning movement, the Movement and Balance senses are most engaged?

My theory is that, (A) through rough and tumble play, all children can work to develop (A1) their frontal cortex with its modulating of executive function and (A2) one of the modalities humans (mostly boys) use to establish their places in social hierarchies... and (B) through spinning, expressive movement, all children can work to develop (B1) their vestibular system and language centers in the brain, and thereby (B2) one of the modalities humans (mostly girls) use to establish their places in social hierarchies. Figures 3 and 4, on the next page, depict how I visualize these interrelationships.

### In summary

When we consider changes to elementary movement programs over the past several decades, perhaps the forms of movement which have been most reduced are rough and tumble, and gymnastics. For both of these, fears are probably the main motivations for the drastic change.

It may be that opportunities for spinning, expressive movement have not been diminished to the same degree as those for rough and tumble; although most schools have cut gymnastics, there is still plenty of dance in most PE programs.

Fear of student injuries is of course an appropriate fear for administrators, school boards, parents and teachers; both gymnastics and wrestling are sports in which injuries occur. I think that in the case of rough and tumble, there is also fear that boys will take the roughness too far; in some cases, general discomfort with the way that boys work things out; and fear that this kind of play looks a lot like bullying (or might look that way to others, in hindsight).

To the contrary, true rough and tumble play is, at heart, play: you know it's happening if the contestants are playful. They're laughing, they can meet each other eye to eye, and there should be flexibility and frequent reversal of winning and losing.

In my experience, gymnastics and rough and tumble can both be part of a relatively safe program, and they are vital ingredients for any program that aspires to meet the true developmental needs of young human beings. By bringing these back, in a thoughtful way, we can re-balance children's readiness for classroom success. As a

plus, they can both also contribute mightily to students' athletic foundations. While not a great many boys now go on to pursue gymnastics in adolescence or beyond, the positional and postural control built up by either gender through elementary gymnastics transfer readily to skateboarding, snowboarding, diving, cheerleading and other more-popular activities. Similarly, although only a minority of boys (and a rarity of girls) will pursue wrestling in high school or beyond, the basics built up through rough and tumble can transfer to all contact sports like football or lacrosse, to semi-contact sports like soccer and basketball... and to all arenas of

life in which there is a test of wills, a need for always thinking one move ahead, and real awareness of one's own strengths and vulnerabilities.

I have found that by starting a progressive program for these two "bookend" sports in First Grade, a culture of safe and playful engagement can be created and nurtured. There are many resources for such activities, available in PE books from the last century. The Resources section of

movementforchildhood.com contains pdf files of a number of out-of-print books, and suggestions for further reading.

*Bibliography is on next page*

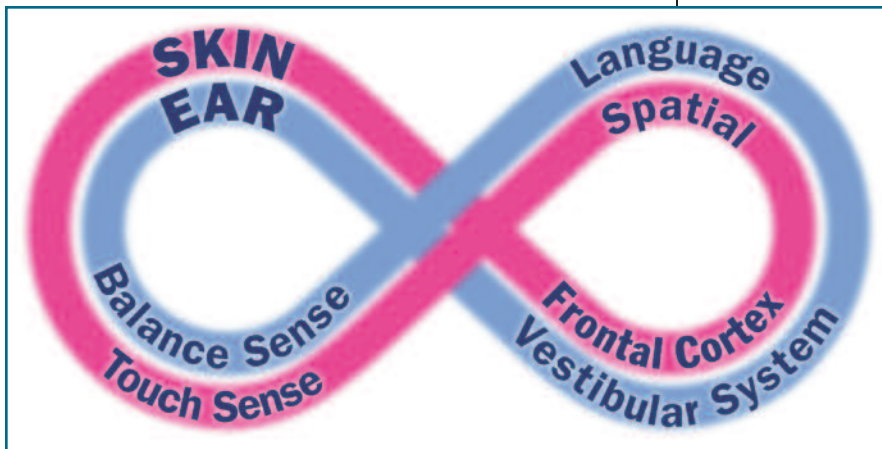


Figure 3. Two interrelated developmental loops that can be strengthened by two polar opposites of childhood play: rough and tumble, and spinning, expressive movement.

Figure 4. Developmental polarities for further exploration.

POLARITY	BOYS (stereotypically)	GIRLS (stereotypically)
<b>Physical structure/organ</b>	<b>SKIN</b>	<b>EAR</b>
<b>12 Senses</b>	Touch sense, also Life	Balance sense, also Movement
<b>Play characteristics</b>	Rough and tumble play Strength	Gymnastics, spinning, dance Beauty
<b>Type of movement</b>	Im-pressive movement (i.e., pressing in, not "awesome!")	Expressive movement
<b>Neurologic development</b>	Executive function	Neurology of language
<b>Multiple intelligences model</b>	Spatial & Math	Language & Interpersonal
<b>Learning style</b>	Right brain; whole to part Visual and Kinesthetic learners	Left brain; linear-sequential Auditory and Reading-Writing learners
<b>Learning difficulties</b>	"On the surface" - evident in early grades  Attention Deficit - Hyperactive Dyslexia	"Hidden secret" - may not manifest until upper grades Attention Deficit - Inattentive Type Dyscalculia

## Bibliography

- 1** *Google, Tell Me. Is My Son a Genius?* available online at [http://www.nytimes.com/2014/01/19/opinion/sunday/google-tell-me-is-my-son-a-genius.html?\\_r=0](http://www.nytimes.com/2014/01/19/opinion/sunday/google-tell-me-is-my-son-a-genius.html?_r=0)
- 2** See [http://www.uphs.upenn.edu/news/News\\_Releases/2013/12/verma/](http://www.uphs.upenn.edu/news/News_Releases/2013/12/verma/) for the university's news release on the research. News outlet reports included, for instance, in *The Independent*, December 3, 2013 - <http://www.independent.co.uk/life-style/the-hardwired-difference-between-male-and-female-brains-could-explain-why-men-are-better-at-map-reading-8978248.html>
- 3** See, for instance, the Nov. 13, 2013 *New York Times*. Article available online at [http://www.nytimes.com/2012/11/14/world/europe/swedish-school-de-emphasizes-gender-lines.html?\\_r=0](http://www.nytimes.com/2012/11/14/world/europe/swedish-school-de-emphasizes-gender-lines.html?_r=0)
- 4** December 16, 2013 *Time Magazine*
- 5** Cited in *The War Against Boys*, Christina Hoff Sommers. See also the book *Why Boys Fail* by Richard Whitmire.
- 6** As noted in a March 10, 2010 op-ed by article titled *The Boys Have Fallen Behind* by Nicholas D. Kristof in the *New York Times*; available online at <http://www.nytimes.com/2010/03/28/opinion/28kristof.html>
- 7** *Education for Adolescents* (originally published in typescript as *The Supplementary Course*). A pdf file of this book is available at [http://www.steinerbooks.org/research/archive/education\\_for\\_adolescents/education\\_for\\_adolescents.pdf](http://www.steinerbooks.org/research/archive/education_for_adolescents/education_for_adolescents.pdf)
- 8** *Faith, Love, Hope: The Third Revelation* – lecture of December 2, 1911. Available online at <http://wn.rsarchive.org/Lectures/FaithLoveHope/19111202p01.html>
- 9** *Children, Play and Development*, by Fergus Hughes; SAGE Publications, Inc; Fourth Edition edition (April 2, 2009). A copy of Hughes' earlier doctoral thesis on this topic is available at <http://www.movementforchildhood.com/uploads/2/1/6/7/21671438/play.pdf>
- 10** Karl König, *Discussions with Teachers – Conferences and Seminars on Mathematics, with Zoological Considerations*. Available online at <http://www.waldorfresearchinstitute.org/pdf/Arithmetic.pdf>
- 11** Alfred Tomatis, *The Ear and the Voice*, Scarecrow Press (December 3, 2004).
- 12** See *Working with the Twelve Senses* on [movementforchildhood.com](http://www.movementforchildhood.com) for additional background on this topic.