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On Wednesday, May 6 Johns Hopkins sponsored a one-day Roundtable on Arts and the Brain, based on the report released last year from the Dana Foundation, indicating that the arts light up parts of the brain like nothing else can do. This was followed in Washington, DC by the tenth annual conference on Learning and the Brain. Both the Roundtable and the conference were attended by Patrice Maynard, AWSNA Leader for Outreach and Development, who sent this report:

Though there is still one more day to the conference here in Washington, D.C., I wanted to let you know how it is going. On Wednesday, Johns Hopkins sponsored a one-day Roundtable on Arts and the Brain, based on the report released last year from the Dana Foundation, indicating that the arts light up parts of the brain like nothing else can do. This was followed in DC by the tenth annual conference on Learning and the Brain.

The Roundtable was an invitation only event and it included 200 researchers, teachers, educational leaders, superintendents, principals, and policy makers. Joan Almon was there representing the Alliance for Childhood and Chaddie Hughes was able to come because of her family's long-time connection with the Museum of Visionary Arts in Baltimore, where the event was held.

The Conference is focused on brain development and its connection to education with an emphasis this year on creativity and the arts. It is an academically oriented event with the presentation of research papers in PowerPoint format. There are "workshops" in which more results of research in papers in power points are presented with ten minutes at the end for questions.

The whole experience has been remarkable. When one meets the highest level of researchers, as we have in these events, the experience is of genuine open-mindedness and concentrated effort to figure out phenomenology. At this level, there is an actual convergence of standard science with phenomenological science to some extent.

William Safire, the Pulitzer Prize-winning master on language who has written "On Language" for the New York Times since the 70s, is the Director of the Dana Foundation. He has been our very charming host for both events.

At the Roundtable discussion we experienced a fleet of Harvard, Stanford, and Boston College researchers in combination with Dana Foundation representatives (the Director of Arts Education at the Dana Foundation is a woman named Janet Eiber who is a former premier dancer for Martha Graham Dance Company), plus Sarah B. Cunningham, the Director of Arts Education for the National

Endowment for the Arts, and Martha Denckla, Professor of Neurology, Pediatrics, and Psychiatry at Johns Hopkins University School of Medicine.

One particularly moving presentation on the effects of music on the ability of the brains of children to receive and comprehend math concepts was offered by Dr. Elizabeth Spelke, from Harvard University. She made it clear that there is no hard research to support the "Mozart Effect," but that she now has demonstrable evidence that in babies and young children, the making of music (not the listening but the singing, composing, playing an instrument) illuminates parts of the brain, as visible in fMRI imaging, that demonstrably makes the comprehension of math accelerate. Dr. Spelke emphasized, in the face of questions, that the use of the playing of instruments should not be a substitute for the teaching of math, but rather, the inclusion of music making in a child's life made the acceptance and understanding of math concepts easier for children who played a musical instrument. Achievement in math increased in these children after this "musical intervention." At my roundtable, Dr. Spelke said that the research made her wonder if the old idea of a good liberal arts education before specialization wasn't the best idea after all. She also knew about Waldorf Education and was really delighted to hear about it. Nancy Andreasen, MD, PhD, at this conference emphasized this idea with her own career of getting a doctorate in Literature and then going back to medical school. Her talk was laced with poetry and quotes from men and women of letters.

The whole arena of neuroscience is new - only 12 years old. All researchers were emphatic about not drawing conclusions too quickly from the data they have gathered. Dr. Layne Kalbfleisch, expressed in a workshop at the conference her frustration at the media who have perpetrated false things about the brain (e.g., Right brain hemisphere creativity, left brain hemisphere linear thinking. All are convinced now it is the interplay between the two hemispheres, an idea well-articulated by Daniel Pink in his book, "A Whole New Mind."). All the scientists expressed increasing wonder at the inter-relatedness of both hemispheres of the brain and indicated how wrong many of their beginning hypotheses have been proven to be. All scientists expressed frustration at the gap between the research and the classroom and asked for any help that educators could offer to them.

At the Johns Hopkins Roundtable, it was astonishingly clear that all discussion of education meant public schools. It was also clear that all discussion of arts curricula indicated periods of time in a week and not integration. At my table I tried to make a plea for independent schools and Waldorf Schools as those who have integrated the arts of all kinds so that there are not "periods" of art much at all because all things are digested artistically as the best way to foster all that is human. There was at my table a professor of education from Purdue University who did not like it at all when I suggested that teachers might be better off being free of the government's imposing curriculum and were left free to respond creatively to children as we do in our schools. I suggested that a good research question might be answered by studying the difference in student response when there was a teacher who invented out of her own insight and one that was instructed to complete certain curricula. The researchers liked the idea but the Purdue Professor did not!

Today Dr. Rex Jung presented his findings on myelination of the brain and the significance of grey and white matter in the brain. His research had taken him into realms of measuring brain response in students identified as "gifted" to uncover implications in the classroom. In the question period I asked him if the

intention of the adults around a child might not be an influence not yet factored in to his research. What if, for example I asked, a teacher thought that all children were gifted in some way and did artistic work with them all the time. Dr. Jung agreed that that would have an impact. I asked him if investigating a classroom like that would interest him, and he enthusiastically said it would. He had not heard of Waldorf Education, so I gave him a "Windows into Waldorf" with my card and he will email me.

Chaddie and I agreed after the Baltimore event that in trying to attract the interest of universities and colleges we might do better contacting researchers (there are many I will write to thank them with a "Windows" from these days) and avoiding education departments. Many in the latter departments do think of education only as public schools. Researchers are open and interested in all innovations in education. Most of these researchers are impressive human beings, full of warmth, dignity, humor, and humility.

Dr. Jerome Kagan, Professor of Psychology at Harvard University, spoke to us at lunch time at the Roundtable, Chaddie and Joan had heard him the day before as well. He is a wonderful human being, full of insight, compassion, and wisdom. He could have been speaking for Waldorf Education. He made an impassioned plea for wholeness in human beings, ethical standards in child rearing and in the world, a remembrance of what real play was like, and less dependence on external things. His books are called, "Galens's Prophecy:

Temperament in Human Nature," and , "Three Seductive Ideas." Temperament and threefolding....I rest my case.

At a workshop today, Jay N. Giedd, MD, expressed to us his amazement that his research has demonstrated that the brain does not fully mature until the age of 25. What's more the last segment to mature, in the frontal cortex, is the most significant part of the brain - that which holds judgments and rationality. Car insurance companies have it right and will not allow 16 to

24 year olds to rent cars or have inexpensive insurance. The number one killer of 16 to 24 year olds remains automobile accidents! (Suicide and violence are the next two in line). He confessed his astonishment and the disconnect between the way we raise youngsters and the reality demonstrated in his research is big, he observed.

The research being revealed in Neurology and fMRI imaging is upsetting old assumptions about how children learn. (Now we can see what's REALLY happening). That much is very clear. The conclusions we have heard in these days sound a lot like us! Arts are good for brain development and for comprehension both verbally and mathematically. The over emphasis on two subjects only is counterproductive to good learning. I think there will be much to follow in the days to come that will help us tremendously. Interest in Waldorf Education will get a big boost from this work - and we already have in being invited. It is a privilege to be here and the future of education might be more filled with the arts than ever. And that's good.

Patrice Maynard