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Preparing for a Brave and New World

by

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When I was thinking about what I might start with this evening, I thought of an old memory from adolescence. The memory goes back to just before high school. As with many teenagers, I had the wonderful job of babysitting. I often would ask myself, how am I going to stay up all night? You can sleep but . . . So I turned on late night movies and watched a “spaghetti” western with Clint Eastwood. *The Good, the Bad, and the Ugly*. That scene stuck with me—came back again and again . . .—Clint Eastwood, left for dead but trying to get back on track, walks into a gun shop, tries the different guns, picks a gun and offers to hire himself out as a gun slinger. The shopkeeper takes him out back to a line of glass bottles. He points to the bottles. Clint takes out his gun, takes careful aim and misses. Clint says, “Can I move?” and starts running sideways. Glass bottles fly everywhere. A silver dollar is tossed into the air and he shoots a hole through it. He asks, “Can I move?” Of course he gets the job as the hired gun. Is it just being able to hit the target or can you move? Now I would like to see if there is some way to make the connection between that and what I will speak about this evening.

Thirteen years ago those students who just graduated began their education in 1989. Do you recall the world of 1989? Faxing, the internet, some people had it – it was not doing very much then. A friend of mine was talking about a garage company called Microsoft . He was going to invest but then he didn't and I'm sure he regrets it. It was the era of the “evil empire” on the political scene—(Russia) Bush in the White House, the eurosedan, new wave headed the music phenomenon and the greatest concern to the United States was the Japanese economy—the end of the American way of life. We would all be working for the Japanese. Here we are in 2002. The “evil empire” is no longer. The eurosedan is now the SUV and it's

getting larger and larger. And the music, oh my gosh—rap, hip hop, Brittany Spears, and that whole crew—trends have come and gone. It is the age of globalization—not one country but the whole world. In my job in 1989 as an engineering product leader I was supposed to look five years over the horizon and 10 years even when possible. Now, in 2002 how many want to guess what the world will look like in 2015. The world has picked up its pace tremendously. If we as adults don't have a sense of the world the teenager will enter how can we prepare them for this brave new world?

I would like to begin here with a book written by Ellen Ulman, *Close to the Machine*. Ellen Ulman was a computer programmer with a real soul in an industry where the world was not seen as she saw it. Her background was not in computer science; she had a liberal arts education. How was it possible for her to be so successful amongst a new generation of computer programmers who could write code but who could not make the connection to the social realm. A whole new way of thinking about education—we already do so much—Let's begin a conversation this evening that points us toward a possible solution as high school teachers, class teachers subject teachers, administrations, and especially early childhood teachers. I am married to a kindergarten teacher and have developed a great interest in what goes on in early childhood. Is it possible for us to begin a conversation that may offer a solution to what this world situation is today? If I were going to prepare somebody for the next generation, what would I look for? Somebody who is flexible, who can look at multiple aspects of a problem, who thinks by not having to go away and brood about for it for a few days. Someone who could be so present that the answer itself can be seen as it unfolds – not having to be discovered some time later. A person who has heart, who is concerned about others as much as themselves—not an easy task. To give you an illustration of what the next generation will have to face I will give two technical issues. The word DaVinci has new meaning. I found these stories in an MIT publication I read called *Technology Review*. This journal is accessible to the average reader. The DaVinci device allows a surgeon to perform surgery while he is over here and the operating table is over there. There is one person standing by the patient the anesthesiologist. Over here is a workstation and the surgeon was performing the surgery via the computer because hanging over the patient was a huge machine with a series of scalpels. With the computer there is precision—no jiggling of hands while performing open-heart surgery on the patient. What hit me was what an experience! A person in the most vulnerable situation a human being can be put in where the human beings encircling them are instead over here looking at the patient via a CRT. Before we pass judgment too quickly think of this: this surgery does not require the doctor to crack the ribs open. Is it worth it or not? The other story, I believe, is already in process. Artificial bladders. Stem cells are placed on a plastic substrate and grown to form a bladder that looks, functions and behaves just like a human bladder, My sense is by the end of this year it was supposed to go into human beings as trials. Plastic substrate grown in laboratory and we have human organs. The goal in ten years is to grow human hearts. As I scientist I tell you, that is a tall order. It should not be just the scientific perspective that is having the final say in the use and implementation in how this type of technology is carried out. How do we prepare individuals for this type of a world?

I'd like to go through the curriculum in typical Waldorf school fashion—back words. If we look at the end, the beginning makes much more sense. When we have one of these

parents who are an engineer or scientist I do this, and my experience has been, that they have rarely argued with this logic. Think about the 12th grade curriculum—most of my experience is with the scientific curriculum so that is where my examples come from. However, what goes on between the sciences, humanities and arts is also very important.

In the 12th grade what is it we are trying to get students to do? In the visual physics block I am trying to get students to become completely aware of how they see the world—not in terms of physics—in terms of experience. How can you make sense of your own experience if you don't have full sensory capacities to draw upon? In the 12th grade, for me as a teacher to do what I am passionate about, I rely completely on every teacher in that school. And you can see in relying on the sensory experience going all the way back to the kindergarten teacher—it must be that way because if we base our thinking on anything but human experience then it is abstract. How can we base our thinking on something other than our experience? If we do then only one thing can arise. It must not be connected to sensory experience. It must have either a yes or no, an either/or way of thinking which is in fact the way a computer works. Is that really thinking? Is thinking only being able to recall bits and pieces—is it just to recall “bits”? I think the humanities block that goes beautifully with visual physics is the block on Faust. There is a parallel between looking at the human experience through literature and looking at the human experience of one individual – themselves. Now in order for that to be possible in the 12th grade another quality is necessary and not always in the physical and tangible sense. Look at the 11th grade curriculum of the invisible—electricity and magnetism—nothing too touch—we can see effects with no tangible. In chemistry, you dig into atomic chemistry. And I would encourage every high school not to shy away from this topic but to dig into the heart of atomic chemistry. Phenomenologically what arises is a view of the world that rips the heart out of materialism. Think of projective geometry and you see what is being taught is not abstract facts but how to deal with that which is not so easily visualized and cannot be touched at all. In order for that to occur the student needs to be able to work with something more physical. The mechanics of 10th grade curriculum are as physical—as grounded as its gets. In the 9th grade there is the beginning of an adult form of thinking. A 9th grader has thinking that is full of feeling—black and white, comedy and tragedy, hot and cold. This “thinking” does not disappear until 10th grade. The polarity of the 9th grader has its beginnings in the 6th, 7th & 8th grade and, lets face it—this is the graveyard of the Waldorf education. Is the 6th, 7th & 8th grade the *bad* or the *ugly*? In the 6th, 7th & 8th grade we have this really interesting situation. We have a bunch of individuals who have a myriad of opinions but can they make sense of them – of anything? And yet it I believe this is the most important point in education today - quite especially in America. Look at our culture—most of it never gets beyond this point. This is what I like and this is what I don't like and if I can come up with a clever argument to get my way then its intellectual. I began as a class teacher in the 6th, 7th & 8th grade to understand better where the science curriculum begins. Is this what students' need? This is how things work, these are the facts, and the test is on Friday, protons, neutrons, electrons, subatomic particles.....smaller and smaller—and then they get to under graduate degrees in physics and have to relearn everything they learned in high school because everything was too materially based. Why does it have to be that way? Thank heavens for the ornery the 6th, 7th & 8th grader. Unless you can feel the separation of the world—feel that alienation manifested quite strongly in the 6th, 7th & 8th grader– you can never begin to look back at the

world with complete freedom . If we don't allow the alienation to occur, the freedom can never properly be arrived at. Other kinds of education keep filling the student up. The body of human knowledge increases at the same rate as computer calculation capacity. It doubles every three years. The body of knowledge (facts) is doubling every three years so you can do the math and see this is an exponential function – how much is the knowledge going to increase by the time kindergarteners are in the 12th grade – it can't happen. We can't keep up. So what is necessary in the 6th, 7th & 8th grade from my perspective is a class teacher who can weather the storm—willow is not quite the right gesture—an ability to roll with it with the strong oak quality being necessary as well so you can stand up to something. If you think about it this is where the cynicism of our culture arises. It was pointed out to me by an 8th grader, why is it all adults say one thing but do something else. Interesting question—do you see all of them saying one thing but doing another? Well not all. But if you look at Clinton, at what is happening in the Catholic Church, at Bush, who seemed untouchable after September 11th, what is meeting you at the surface is not what is underneath. What these 6th, 7th & 8th graders are looking for is, is there an adult who is living up to the ideals? An adult who can laugh a bit, have humor, won't back away. The 6th, 7th & 8th graders ideals, which are mixed with emotions, won't manifest until high school. Then the cynicism can take a back seat and ideals can come forward rather than the other way around. So this almost being wonderful emotional quality of the 6th, 7th & 8th grader arises out of 3rd, 4th & 5th. A wonderful time, a feeling life that is wonderful. One can see the connection from the world is not separated yet, and yet even that feeling life – the rich individual feeling life that arises in 3rd, 4th & 5th grade is based on the rhythmic activity of the 1st & 2nd grader. Rhythm rather than the tangible giving of facts – can this really work? Learning what the nature of each letter is? Of course the answer is yes but it is worth asking the question. In all honesty the most misunderstood profession of in Waldorf education is that of the early childhood teacher. In New York State the kindergarten children have to be starting to read at the end of kindergarten. What is it if you don't have a rich background of sensory experience to draw upon? The sense of touch is a basic sense and yet something that we all know is becoming more and more foreign. We don't need real objects in cyberspace. It is possible to spend an entire life in a plastic world. Remember that wonderful prophetic quote from the film with Dustin Hoffman – the future is in plastics. Even in 1980 there was a song—*The Video Killed the Radio Star* and the title of the album was *Living in the Plastic Age*. Real materials are no commonly longer experienced. How in 11th grade can you dig into the nature of the atom and begin to understand electric fields and magnetic fields if you have not had a grounding in your own experience of touch? The distinction of seeming an image and touching an image—a subtle distinction. Our visual sense is used as a pseudo sense of touch. The attitude arises, everything that is seen is real and that which is real is that which can be touched. In kindergarten all the sensory experiences are advocated for - sounds, smells, tasks, activities, movement - because it is actually the movement that will allow them to take all of these sensory experiences and face the new world and that facing might look something like this. If we look into the relationship between percept and concept as described in *Philosophy of Freedom*, Rudolf Steiner's work comes back here—the relationship of our perception to our thinking—we find that a concept is there initially with the perception. It arises from the sensory experience itself. Now we have been living in a luxury for 100's of years where we can literally stop time—what a minute, let me think about that, we freeze when we

think—we hold our breath—a moment of death—thinking as a death activity—it really is. But now what happens if instead of stopping time which is a past orienting activity—if we can develop human beings who are always enough in the present—not just in the ability to make subtle distinctions but in the body’s senses, reading the person in front of me – what do I sense as their motivation—to be fully present in the situation. The next step is already present in that moment. See not moments but an activity of process in a living world and in thinking about this I realize that this incredible speeding up—to realize that the speeding up of the world is a gift and the students we are teaching already know it. Not a thinking that has to be dead but a thinking that is alive—see the phenomena as they arise. No using solutions of the past but solutions in the present moment. I had a conversation with Gary before dinner about children on a computer who “chat.” They have eight screens, eight conversations going on and this almost looks schizophrenic. How do they keep track? It became apparent when observing a skateboard park in middle of a recreation park. Skateboarders look like a tough crowd but if you have a conversation with one you meet an incredibly awake individual. The body connection transcends their own body and connects with the skateboard. Watch as they leave the ground—both they and the skateboard arrive at the same place at the same time and the movement continues. My wife said they are healing the things they did not get in early childhood and the movement is alive and conscious. The ability to think in the moment is consciousness. And my sense is that this is the gift we can give to the class of 2015—the world will change but if we can give them the capacity to experience the world in a rich fashion – to be able to follow a process from beginning to end but not loose track in a 2.5 second sound bite but see continuously. To be able to see not only the visible but the invisible. These students will not only be able to enter the world as adults that can face the world of change but also deal with fear. Pick up a paper toady—who is it we are supposed to be afraid of – today it is the gasoline delivery trucks—every single one could be drives by a terrorist. Yesterday it was the people who were buying ambulances—two guy were questioned because they bought an ambulance with cash. We want to know who to be afraid of. If we can prepare students to be present to the world, I don’t think it matters what the world looks like 15 years from now. They will be able to handle it. In any corporation, any social organization, any not-for-profit. They will be able to handle faculty meetings pretty well! They will be able to do any to this. One more thing that is required, that is us—we have to model this—we can’t put it all on the student to pull it out of themselves. We can model it. What I hear over and over is that the faculty meetings go on and on. Everything takes to long. Maybe we are being asked to do the same thing. If we model this it will require a more intimate working together. To say what needs to be said in the moment—not to ignore the soul quality and how people will respond but not to wait forever to put it out there. We can begin this process over the course of this conference. Those who work as kindergarten teachers, class teachers, subject teachers, high school teachersall begin this conversation. And lest you think this is just something for Waldorf schools I would like to end with a poem. I think this poet has his pulse on this modern way of being, activity, movement. It was written for The Boeing Company for their introduction of their new super jet 777. The poet is David White entitled: *Working Together We shaped ourselves to fit this world . . .*

* Members of the Waldorf High School Project core group have edited this article and the speaker has reviewed it, however, it is considered to be in draft format lacking a complete edit. It is provided so that AWSNA schools can make use of the content.

— David Mitchell
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