Of Ants and Human Beings
Technology and the Urgent Need for New Ideas to Protect Children, Our Communities, and the Future

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While sitting on the grass attaching stickers to tag sale items not long ago, I was repeatedly interrupted by a group of ants. When my annoyance got the better of me, I paused in the work to examine why there were so many of them. It soon became clear that my choice of workstation was exactly in the path of a very long, single-file line of ants, each carrying a tiny white package. It appeared that the ants were moving house in a systematic way. I traced the line a very long distance before I found the original ant mound from which the parade was emanating.

Picking up one of the ants, I marveled at how energetically the little thing fought me, thrashing around frantically and pounding its miniscule legs against my fingers, while hanging on tenaciously to its small, white package. Looking more closely at the precious cargo, I realized with a kind of shock that the ants were transporting eggs. The fact caught in my throat. The ant put me to shame in its willingness to protect its young. What can we learn from the ants about how to protect little ones this ferociously?

In an interview with me two years ago, Dr. Audra Steiner, of the University Eye Center at SUNY Optometry in New York City, explained that the clinic faced substantial change because their therapy for children was geared toward the cultivation of the small motor skills necessary to improve eyesight for visually impaired children: eye-hand coordination, eye tracking, development of peripheral eye muscles that may have atrophied from over-use of frontal focus, etc. However, the increasing absence of gross motor skills in their clients made the small motor skill therapy more complex. Establishing the first set of skills is best before the second set is developed. The clinic was considering an overhaul, both in the physical plant and in the

training of the clinicians, in which physicians would start with the missing gross motor skill development before tackling the small motor skills they were trained to practice with children. The staff at the clinic observed that the reason for the children's diminishing gross motor skills was the increasing use of screens.

We were speaking together because of one little girl who attended the clinic and who also attended a Waldorf school. This little girl, who had experienced neurological deficiencies in her eyesight from birth, showed remarkable improvement well beyond what those at the clinic thought possible. All on the medical staff were impressed with the effects the Waldorf curriculum had on the child, with the capacities it made possible for this first grader. Dr. Steiner was interested in what was happening in the Waldorf school, curious about what collaboration might be possible.

"Computer Vision Syndrome and Digital Eye Strain" is one health hazard of computer use in the very young[1] (and in adults as well), but neck and back problems, it turns out, are a risk also.[2] In addition it has been established that too much exposure to HEV (high energy visible light) in youth can increase the risk of macular degeneration later in life.[3]

Vision is but one area in which health is affected by screens. Electromagnetic exposure from computers, cell phones, electronic pads, and all electronic equipment has now been officially designated a carcinogen.[4] These devices have been demonstrated to increase the occurrence of hyperactive behavior, sleep disorders, headaches, and depression in children. Moreover, there are now centers to help people with addiction that can occur from screen use and video games;[5] in some countries (not yet in the U.S.) computer

addiction, especially to video games, has been declared an official clinical disorder.[6]

A 2015 article in *The New York Times* described the toll these games are taking on children. In 2013 "Internet Gaming Disorder" was placed in the chief psychiatric guidebook, the *Diagnostic and Statistical Manual of Mental Disorders*.[7]

In *The New York Times* article, "A Silicon Valley School That Doesn't Compute," a front page story, Sunday, October 23, 2011, by Matt Richtel,[8] we read that the engineers and designers of electronic "toys" in Silicon Valley, understanding that these devices are not wholesome for children, do not allow their children to play with these things. Many of them have their children in "low-tech" Waldorf schools, where technology is held back until high school, and even then its use is limited. In a different *New York Times* article in 2015, we learned that Steve Jobs was a "low-tech parent" who did not allow his children to use the devices Apple made.[9]

The same Matt Richtel of the 2011 report wrote in a more recent article that the only research claiming to show that computers improve children's performance in school were those conducted by Microsoft and Apple.[10]

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Based on both the overwhelming body of research and information available on all these dangerous aspects of electronic usage, especially for youngsters in our culture, and to the presence of "helicopter parents," it is difficult to understand the rampant use of electronics among children. Twice as many children have cell phones now as in 2004. Most teens, 85% of those aged 14 to 17, have cell phones. So do 69% of 11–14-year-olds and 31% of kids aged 8–10, according to a 2010 survey by the Kaiser Family Foundation.[11]

Michaela Glöckler, MD, former Head of the Medical Section at the Goetheanum in Dornach, was reported to have speculated at a 2014 conference that electronics might become the asbestos "class action suit" of the 21st century.

While the value of electronics and rapid communication is undeniable, their proper use for maximum health and value lags very far behind the rate of their invention. The speed with which electronics have become "ordinary" in our culture is astonishing. The way computers and electronics have solved problems, especially in the fields of information sharing and medical practice, is impressive. This makes it easy to hear in the marketing of these devices the promises made about the potential of electronics and the optimistic hope we hold for them to solve all our problems sometime soon.

However, there are a couple of particularly tragic results of this rapid "normalization" of electronics. Children's disconnection from the natural world is one of them; the social problems these devices create, most notably in the arena of communication and care for others, is another.

Though it isn't responsible to liken "Nature Deficit Disorder"—a non-medical term coined by Richard Louv in his book, *Last Child in the Woods*—or social misunderstandings to the health hazards listed above, the destructive power of electronics is illustrated by stories we hear in our culture and even in our Waldorf communities.

On a recent canoe trip, a trip leader lamented that the number of families who explore the beauty of the natural surroundings of river wildlife has diminished in recent years. He reported, "Parents say that such a canoe trip just doesn't have enough excitement for their children." While it is true that the entire activity of, say, a duck on a pond on any given

day might take the form of paddling once or twice from one end of the pond to the other, fishing now and then along the way, there was a time when children could sit by the edge of the pond and enjoy the very slowness of the action. Now children's expectations are often built by "nature shows" that explain how an animal likes to sleep most of the time in the shade, but the footage that goes along with the narration shows copulation, birth, wrestling with the young and disciplinary action, mother animal to baby, in a three-minute span of time. No wonder youngsters poke sticks at sleeping animals and wonder where the action is.

Waldorf schools plead with parents to keep little ones away from all screen technology—TVs, computers, electronic pads, cell phones, etc.—until at least the upper end of elementary school. Further, Waldorf schools ask parents to avoid using all media around the young. The goals are multifarious, but the work to unite children through their school experience with the real world before the virtual world, especially with the realms of nature in deep, living, and caring ways is one paramount goal.

This goal can lead to a number of social problems. Waldorf schools are sometimes ridiculed, as are Waldorf teachers, for taking a stand against the early use of media. A "get with it" message comes from one segment of the parent body. On the other hand, many other parents are relieved to find a school that asks for this kind of adherence for the sake of protecting childhood. In this group, frustration may result if a teacher or a school is perceived as being too lax about enforcing its media policies. Factions can develop then in the community—"good" parents and "bad" parents. Sometimes parents will lie, saying they do not have devices in their homes when, in fact, they do. Students may describe a movie they saw and then catch themselves in

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front of a teacher, saying, "Oh, my father told me not to tell you that I saw it."

Sleepovers with friends, birthday parties, and recreational activities can all become contentious within a class of children when movies are shown or video games are used as entertainment in some homes, while in others this is never part of the activity agenda. Children in the elementary grades who watch movies come to school acting out what they have seen, telling in detail the storyline of a movie, singing the songs of the movie soundtrack (*Frozen* was a recent, popular example). This influences the free play of youngsters and can elicit arguments at home ("Everybody in school has seen this except me!"), or isolate children who do not know the songs because they did not see the movies. It can also interfere with lessons. When a teacher tells, for example, of ancient Egypt in grade five, and a child has seen a movie about Egypt, arguments can erupt about which is correct: movie or teacher. Any mood of awe or wonder the teacher might have been yearning to generate is lost. Fairy tales in their original form become "wrong" because fairy tales in movies are so very different from their original versions. Vivid pictures of movies are taken in by first through fourth graders as "truth." Imagination wanes as media pictures supplant the inner pictures that children need to create in order fully to experience an orally-told story. Moviegoers sometimes ridicule children who do not go to movies. Some children can have nightmares from movies or even from vividly described movies.

Woven into this social undermining are perhaps the dangerous judgments that can go from family to family. In more than one school community, whole classes have been ripped apart by conflicts connected to these issues, these judgments. An illuminating situation erupted when in one school community a third grader

had a friend over to play. The two little boys got into an unguarded and unprotected computer at the home of the play date. Very quickly, within twenty minutes or so, the boys ended up on a pornographic site.

The host family in whose home this occurred was understandably mortified, apologetic, and upset that this had happened. The community turned its back on the family and ostracized them, asking the school to expel the child and thereby "get rid of" the family. The family of the child who went to that home felt that their son had been irrevocably damaged. Some people even asked the host parents, "Why send your child to a Waldorf school if you do not believe in its ideals and follow its recommendations?" Hostility then poured out against all families who had casual practices around electronic devices. Under this pressure, increased lying about actual practices set in. Because the class teacher expressed compassion for the situation and for the family whose home was the scene of the incident, many families were angry with the teacher. Some even withdrew their children to get them to a more "pure" and safe environment. The school lost credibility, enrollment, and stability.

Rather than wishing for Waldorf communities to catch up with the modern world and to "get with it," we could imagine Waldorf communities as being ahead of the times, protecting generations of children while the world "catches up" to available research.

There are even darker stories of youngsters lost or abused through unsupervised Internet activities. Pre-teens, who in their very nature tend toward experimentation and secretive plans, are vulnerable to predators who have unlimited access and can disguise their age, intentions, and identity using social media.[12]

Cyber bullying and anonymous "hazing" can drive young people to extremes such as suicide and dangerous revenge games.[13] "Trash talk" in social media, "sexting,"[14] and other degrading activities encourage habits of thought and expression that go in the opposite direction of

"lofty," or "poetic," or "philosophical."[15] Texting, Facebook, instant messaging, and What's app can usurp a teen's time and develop other sorts of habits of behavior and thinking.[16]

Of course, the opportunity is contained in all of these "new" possibilities to build more conscious communities with clear agreements about a desirable way of life for us and for our children. Research evidence supports Dr. Glöckler's prediction that electronic devices will, in the near future, become the asbestos and tobacco of the second half of the 21st century. The deliberately misleading marketing during the 20th century of both tobacco and asbestos—as well as the suppression of known information concerning the lethal effects of these substances in order to increase sales and profits at the expense of human health—is instructive for us. The drive to protect profits is perhaps even stronger now than it was in the past. However, pro-activity on the part of a conscious parental and educational community could make an environment for children much less stressful, more wholesome, more playful, more linked with the natural world, and more in keeping with the ordinary tendencies of childhood. The Waldorf curriculum, daily artistic activity, involvement in making music are all designed to bring the very antidote needed for the distraction, demoralizing, and negative social trends possible with electronics.

Rather than wishing for Waldorf communities to catch up with the modern world and to "get with it," we could imagine Waldorf communities as being ahead of the times, protecting generations of children while the world "catches up" to available research. They could employ the available research data and behave more like the ant kingdom in the energetic protection of children than like "sheeple," following advertising

shepherds in the pursuit of the latest media frenzy. Strength in the individual, or ethical individualism, in an awake community is possible. Using technology as tools in support of our own creativity as human beings is the highest and best application of technology.

In the process, a deliberate and crystal-clear goal could be to develop cooperating communities that work consciously together to build agreements based on the wisdom of everyone included in the community. Imagine agreements that are kept and admired and that leave all free from ridicule. The effect on the students in that community could be powerful and long lasting. A few initial ways to begin this process might include:

- Articulated goals to protect children from all harmful substances until well into late teenage years (e.g., 17 or 18);
- Collected research that underscores the value of the first practice, made readily available for all in a school community to study;
- Articulated agreements, class to class, on practices during play dates, sleepovers, birthday parties, and other social gatherings involving youngsters so that all parents can rely on each other to uphold the agreements made;
- Clearly defined agreements on the use of texting, email, and social media in a school community;
- Practices in place on how to uphold agreements in quick, clear ways that avoid judgment and affirm the original agreements;
- Informational sessions for community members about child development, the critical times of change in a youngster's growth, and how the Waldorf curriculum

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is designed to support these nodal points for strength in the adult that the child will become;

- Published lists of community-designed activities that offer alternatives to technology-oriented activities;
- Helpful support for families who might have difficulty keeping agreements;
- Trust, courtesy, laughter, and friendliness developed as conscious activities in a community.

Of course, our Waldorf curriculum already holds within it much of these community-building practices. At the same time, Waldorf schools have celebrated the excellence of electronics as the tools they are, working in a systematic way to include computer technology in math and science classes once the students are old enough to have developed skills of clear thinking and analysis on their own. In this way students can, in turn, understand electronic devices both as the marvelous tools they are and as the support they can provide as aids in strategic thinking and quick research. The resilience of soul and maturity of feelings that the rich and multifarious use of the arts in the curriculum cultivate can prove to be a shield against over-dependence on all but human skills. Problem-solving, depth of understanding of technology, and creativity, particularly for those who continue through to graduation from grade twelve in a Waldorf school, are skills that are cited repeatedly by professors and employers who enjoy teaching and hiring Waldorf graduates. 42% of Waldorf high school graduates enter fields of the sciences, including technology. Some have won awards for using their artistic sensibilities to design models and graphics that are unusually

illuminating in presenting complex concepts and new techniques.

Using research as tools for honest and constructive community-building and sustaining might be the best use of all the research we now have available about the great potential and degrading dependence possible in using technology. Protecting children in light of the results of studies available is more urgent, perhaps, than the marketing of electronics and technology might lead the world to believe. Taking time to understand the research and to develop good practices might be time well spent—inefficient in the short run and most efficient in the long run. The patience and determination of the ant kingdom is the picture to hold.

ENDNOTES

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