



Google That! Education and Technology

2015 - ISSUE FOUR





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On Why a Tool Belt Belongs in a Backpack

Matthew B. Crawford, *Shop Class as Soulcraft: An Inquiry into the Value of Work* (New York: Penguin Press, 2009).

In *Shop Class as Soulcraft*, Matthew Crawford presents a case for the value of manual labor in a world shaped increasingly by information technologies, social media, and other engines of abstraction. The case turns on what ought to be an obvious point, but it is one that arrives in the context of the contemporary culture like a subversive idea: because it calls on the full engagement of body and soul and requires us to conform ourselves self-forgetfully to an objective reality that resists our attempts to subjugate it, manual labor offers the opportunity for both self-knowledge and knowledge of the world; it allows us to achieve something of value that is indisputably real; and it brings us into a community of those who appreciate this value and understand the quality of work required to bring it into being. In short, working with our hands at something good, true, and beautiful helps us to recall what it means to be genuinely human, against the current of a culture that is rolling relentlessly into the “trans” future. Crawford believes that there is a growing openness to his proposal: “We worry that we are becoming stupider, and begin to wonder if getting an adequate *grasp* on the world, intellectually depends on getting a handle on it in a liberal and active sense” (7).

At the heart of Crawford’s case lies a distinction between *freedom* and *agency*. (One might take issue with Crawford’s concession of the name “freedom” to what turns out to be a severely impoverished form of the reality, but this is primarily a semantic point.) The former Crawford identifies as the cultural ideal of liberation from burdens and limitations of various sorts (the essentially negative concept of “freedom *from*”), while the latter represents the more classical notion of formed capacity, the positive ability to accomplish some particular act (“freedom *for*”), which can be acquired only through training and patient practice—that is, through *work*. While at a superficial level, these two may seem similar, insofar as they both betoken a certain kind of power, at a deeper level they prove to be virtually opposed. The acquisition of agency requires *submission* in at least two forms: first, there is the deferential entrusting of oneself to an authority in the matter who has undergone the training himself (an apprenticeship to a mentor) and, more fundamentally, there is one’s unavoidable subjection to the objective reality of the thing on which one works: “to be master of your own stuff entails also being mastered by it” (57). It is *in* and *through* dependence that one achieves a kind of independence, a confidence in one’s ability, which opens up the material world and makes it familiar and accessible.

The precise opposite occurs in the pursuit of “freedom,” understood in the prevailing negative sense of the term. Here, the goal is precisely to “disburden” oneself as far as possible, to figure out the most effective means of producing results at the least cost in terms of human effort, labor, and responsibility. Crawford describes the pursuit of this goal in the realm of work as a progressive “separation of thinking from doing” (37–53) that occurred through the various revolutions in industry, economics, and technology. Perhaps the most significant of these in relation to the particular problem of agency is the radical division of labor that was systematically implemented in the twentieth century to produce an inconceivably vast amount of “goods” precisely by shrinking the qualitative content of work. The

“intellectual” activities of planning, management, marketing, sales, and so forth, have been parceled out from the actual production of real things, which itself has been broken down into uninteresting bits. The result is the juxtaposition of a kind of thinking that has grown abstract and ineffectual and a kind of doing that has ceased to engage the mind. Neither is adequate to a dignified existence; work in the authentically human sense that involves the whole person in the bringing into being of something real and good has all but disappeared.

There is a terrible irony in this pursuit of “freedom,” the evidence of which has become increasingly hard to deny: the very power that such developments have enabled us to achieve, because it occurs by means of an elimination of dependence *and therefore of genuine human connection with reality*, turns out to be merely the flipside of impotence. This impotence appears in the mass of unskilled labor, and laborless—*fruit-less*—skill that constitutes an increasing proportion of the workforce. But we also find it in the passivity that is constantly reinforced on the consumption end of the transaction. On the one hand, we are learning, like no other people before us, to use and enjoy things with little personal involvement with their reality, and on the other hand we are becoming increasingly defenseless against the insidious designs of the market.

Crawford is especially good at unmasking the manipulation at work in prominent cultural phenomena that present themselves as enhancements of freedom and control, and assessing the deep implications of what might otherwise appear trivial:

One of the hottest things at the shopping mall right now is a store called Build-a-Bear, where children are said to make their own teddy bears. I went into one of these stores, and it turns out that what the kid actually does is select the features and clothes for the bear on a computer screen, then the bear is made for him. Some entity has leaped in ahead of us and taken care of things already, with a kind of solicitude. The effect is to preempt cultivation of embodied agency, the sort that is natural to us. . . . Children so preempted will be more well adjusted to emerging patterns of work and consumption.
(69)

According to Crawford, a straightforward sign of our being collectively caught in this cultural drift is the disappearance of shop class from high school curricula. It is assumed, apparently, that only “white-collar” work, separated from a hands-on engagement with material things, carries dignity and represents “success.” But the realization that working at a desk does not guarantee working with one’s mind is growing, so much so that it has become a recognizable theme in popular culture: witness the TV show “The Office,” or the comic strip “Dilbert.” We are getting lost in empty abstractions. A simple way to put up some resistance to this drift is to exercise agency and to deepen our sense of the value of what countless generations have taken for granted. The classical tradition, for one, considered the hands the bodily expression of intelligence, and therefore understood work as a way of knowing the world. Students need to be introduced to this insight. A program of education centered on mentorship in forms of human work is indispensable in this regard. The “kind of thinking” entailed in manual labor “offers a counterweight to the culture of narcissism” (102). We rise to this sort of thinking when we learn to embrace the patient effort, and the personal attention, inevitably required to do something that is *real*.

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On Why the *Disciple* Knows More

LISA LICKONA

Matthew B. Crawford, *The World Beyond Your Head: On Becoming an Individual in an Age of Distraction* (New York: Farrar, Straus and Giroux, 2015).

I was captured from the first pages of Matthew B. Crawford's *The World Beyond Your Head: On Becoming an Individual in an Age of Distraction*, for I could not help but identify with the multitasking Mr. Platt of the *Onion* piece he cites—a man whose head is kept spinning by the relentless demands of life. With his attention restlessly flitting from one object to the next, he finds himself unable to be truly present to anything or anyone: “joy can get no grip on him” (7).

Mr. Platt serves to introduce Crawford's point: attention is a dwindling resource in our day. And this should give us pause, for the ability to give one's sustained attention to something or someone outside oneself is at the heart of learning; education, Crawford argues, demands a certain asceticism. Moreover, even as we find our bliss clicking and swiping through the worlds coming to us through our computers and our phones, we find ourselves more and more at the mercy of others who decide what we see and what we do not see. *They* keep our heads spinning. We sense that our freedom, our true agency and, ultimately, as in Mr. Platt's case, our capacity for joy, are under attack.

Crawford crafts a response to this situation, an “ethics of attention for our time, grounded in a realistic account of the mind and a critical gaze at modern culture” (7). He takes special aim at Enlightenment thought, especially Immanuel Kant. In trying to salvage the self that was dissected and reduced by Hobbes, Locke and Descartes, Kant rebuilds it as a supreme sovereign, independent of all outside input—the basis of our capitalist consumer-chooser. But, Crawford argues, Kant's version of how self meets world does not hold up. Drawing on modern studies of perception, cognition and his own deft philosophizing, Crawford shows that the self—and thus freedom and individuality—must develop through an encounter with the world outside itself, through a submission to things, other people and the collected inheritance of tradition.

Crawford's self is embodied and embedded, a skilled hockey player who experiences the stick as an extension of his body, a glassblower who creates in an un-choreographed but highly-ordered dance with his colleagues, a motorcycle rider whose near-misses and close escapes hone his abilities. His is a vision of “human excellence. . . of a powerful, independent mind working at full song” (26). Through his multi-layered reflection, Crawford awakens us to human freedom as a human flourishing, and reason robustly engaged, no longer—as in Kant and his ilk—a mere handmaid of personal preference.

I found myself craving the kind of fullness that Crawford presents—the surging delight of the experienced short-order cook working at full tilt, the race-car driver at one with the road, the organ-maker ensconced in his venerable tradition. And this is one of his finer points. Our fruitful relationship with the real is not only one of engagement and, frankly, submission, but it is “erotic”: we are *drawn* to the world outside ourselves; we seek a “fit” with the world. Crawford salvages education as a “being led

out.” He rescues beauty and a religious sense that sees reality as somehow “personal.” “Affection for the world as it is: this could be taken as the motto for a this-worldly ethics” (253).

True to his background as both political philosopher and motorcycle mechanic, Crawford is a real everyman’s thinker. Several chapters stand out. “Virtual Reality as Moral Ideal” tells the story of the evolution of Disney’s Mickey Mouse club from slapstick comedy with real-world dangers—buckets, traps and springs—to a gentler educational bubble in which problems are solved by the push of a button—all as an illustration of the perils of Enlightenment epistemology.

In “Autism as a Design Principle: Gambling” Crawford shows how the sort of dissipation of agency that plagues the autistic child is actually an aim of the creators of casino culture, a “design principle” that is supported by appeals to personal freedom. I found myself rushing to photocopy this chapter for my own teens, to help them grasp the forces at play in an industry that increasingly targets them. And in “The Culture of Performance,” Crawford reveals how the sovereign self has evolved in the wake of the bra-burning 1960’s—freer than ever from “tyrannical” authority, but also bereft of traditions and contexts that provide a secure place in the world. For today’s workers, “the ideal of being experienced has given way to the ideal of being flexible” (163). And so: “The affliction of guilt has given way to weariness—weariness with the vague and unending project of having to become one’s fullest self. We call this depression” (165). When depression meets the post-Cartesian reduction of the self to a collection of bio-chemical interactions, we are left with but one solution: Prozac. Once again, I was at the photocopier, thinking of the angsty twenty-somethings in my life.

For a moment, technology seems to take it on the chin: for Crawford our technologies are often just incarnations of our need to insulate the sovereign self, always in danger from others and thus always in need of protective mediating realities. (Think of the hermetically-sealed car engine that shields us from that mess of mechanical things and our smart phones that insulate us from the people right next to us.) But, really, Crawford just presents a different vision of technology, one that is aligned with his epistemology. In the extended interlude that forms the final part of the book, he shows us what technology looks like in the hands of a skilled organ maker, where tools and materials serve sounds, building structure, liturgical style and even the economics of the marketplace. Crawford does not hate technology; he grounds it in a sweeter vision of human excellence than that to which we are accustomed.

This book is much needed. And I, for one, am won over. Let’s reclaim the real.

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Inspiring the Imagination with Visions of the True, Good and Beautiful

KATRINA TEN EYCK

Anthony Esolen, *Life Under Compulsion: Ten Ways to Destroy the Humanity of Your Child* (Wilmington, DE: ISI Books, 2015).

In a recent conversation over homeschooling, a friend suggested that children ought to go to school to learn to sit at a desk all day, as they will most likely have to do this for most of their working life. I was a bit dumbfounded by the argument. I couldn't understand how a mother could both believe that the large part of public education is to prepare a child to take up the drudgery of sitting at a desk and be willing to hand her own child over to be fashioned into such a cog in the economic machine. Anthony Esolen's book, *Life Under Compulsion: Ten Ways to Destroy the Humanity of Your Child* is an attempt to respond to the widespread conviction that children must be compelled to take up their place within a predetermined economic-social system that chiefly operates via external compulsion. Moreover, it is a defense of true freedom and an attempt to restore the image of freedom to our imaginations. For Esolen, and rightly so, seems to labor under the belief that the family home, as the original image of a thriving, full and free human community, has been dimmed, if not extinguished, in our minds.

Esolen has not set out to simply demonstrate that our society has become compulsive in every sense of the word and then to argue for the restoration of family life as a central source for the ordering of common life. Although, it would not be difficult to show that the ever expanding role of government means an ever growing list of compulsory activities for us citizens. Nor would it be difficult to show that much of our "productive time"—work or education—is done simply because we *must*, and to argue that simultaneously we are ever more prone to filling our spare time with sub-human compulsive eating, tweeting, internet surfing, TV-watching, gaming, pornography, exercising, sex, etc...; Esolen trusts the reader to be able to recognize these truths from his or her own experience and foregoes invoking studies and statistics. He is concerned with something more fundamental, namely, the loss of the ability to even think about the situation we find ourselves in. For, as he argues in his book, rational thinking is ever more narrowly defined as scientific thinking. Schools have championed the "hard" sciences, but have failed to develop students' imaginative thinking. By imagination he has much more in mind than fantasy. He is thinking about how a child might react to first hearing the story of Odysseus, how his fertile imagination will grasp ideas of bravery, heroism, cowardice, betrayal, and the home, which will in turn, if nurtured, be the beginnings of a more nuanced understanding of the same ideas. It is also the imagination that is necessary to read history not as a collection of dates and facts, but as a human history revealing timeless truths.

Esolen's methodology mirrors his concerns. He places before his readers scenes of human experiences culled from Dante and Shakespeare, Milton, Sigrid Undset, Chesterton, C.S. Lewis, George Orwell, and Norman Rockwell, to name a few, as well invoking a variety of historical and fictional anecdotes. He seeks to respond to the arbitrary limitations placed on thinking by engaging his readers' imaginations,

placing before us images of beauty, at times tragic, whose meaning points to a freedom that is gained through adherence to the bonds of love. Esolen attempts to defend freedom and humanity by appealing to our humanity, to reawaken our anesthetized sense for the truly human life—one that is free to delight in beauty, to affirm the truth, and heroically offer itself for what is good. To feel the force of his arguments, one must step away from the scientific, economic, utilitarian thinking that commands such widespread adherence, and make room for some human imagination. In the words of Paul Elmer More, whom Esolen quotes, “We win our freedom by using our critical imagination, which makes the past present to us, and makes us the heirs of a prodigious patrimony” (47).

In the introduction to the book, Esolen defines compulsion and freedom. He writes, “The compulsions I am talking about in this book not only make us less than heroes; they also make us less than human. They bind us to automatisms. They give us choice in what is evil or foolish or trivial, just as the keepers of an asylum will let their charges watch television or play poker for pennies” (15). Compulsion is not opposed to having options. “The assumption is now nearly automatic that freedom is without substance. It is an extrinsic condition, and a negative at that. It means that there are no strings upon the autonomous self. It is, as I have suggested above, freedom as license, as a permission slip to do as you please” (17). Esolen points out that such a cry for freedom — “leave me alone! I’ll do whatever I want!”—echoes the adolescent brat. And, like the sullen teenager, we are surrounded by voices issuing commands (wear these clothes, do well in school, advance in your career, lose weight, get your child to sleep through the night, see this movie, buy this car) in order to “rule, or make money, or ‘perform’” (18). The ability to discern between options is not regarded as significant. Furthermore, exactly *where* all of this leads remains shadowy. The definition of what precise fulfillment follows upon the ever present *must* is defined without reference to truth, goodness, love or beauty; often failing to materialize or disappointing when it does. This is the life under compulsion for Esolen.

Freedom, in contrast, is “an intrinsic virtue” (20). Esolen points out that the old meaning of the word *free* was related to “joy and greatness of heart” (20). For Esolen, the substance of freedom consists in the relation of love and community that binds one person to another, that defines humanity. The ultimate freedom is the freedom to love, to give oneself to another, to truth, to beauty and to goodness. A free man is able to discern among the many voices and pressures calling out what he *must* do that thing which he will do because it is the true act, the good act that leads to love and can be realized in beauty. A free woman, when facing danger, has a capacity for courage and even creativity instead of simply fleeing. The free person can profit from silence, can attentively read a book, or even listen to another. Freedom, for Esolen, is tightly bound to developing one’s humanity—that is, to be strong in virtue, to have developed one’s mind and capacity to think on serious subjects, to have educated one’s sense of beauty and goodness. To be free is to flourish, not simply to have the capacity to choose according to caprice.

To bring the entire matter home, Esolen places the issue of compulsion and freedom as a question of what we want for our children. Because, indeed, we might endure much in regards to ourselves, but it is too painful to offer the same pathetic fare to one’s own child—would a father give his child a stone when he asked for bread? From here Esolen begins with a chapter that looks at how we are educating children, which then leads him to examine the various ways in which this mis-education plays out in society at large. Present in the school is already a disregard for the humanity of the child when the scientific method becomes the only method. The emphasis on efficiency and provable facts creates a climate in which imagination and the disciplines that require it—such as history, literature, philosophy, languages—are disregarded or altered to reflect the primacy of scientific thinking. In this way a child’s aspirations to what is noble, what is courageous, or his inklings of beauty and tragedy, as well as his spontaneous demand for truth, are denied, declared of no use, and refused the nourishment and

training needed to shape an imagination capable of regarding human history and art, and discerning the essential. This, of course, spills over into the work environment, our free time, our ability to discern between what is human and subhuman, and our loss of a sense of history. Most tragically, all of this invades the family and the home. The utilitarian, technocratic education system does not look at the family as the original and best educator, but as something that must be overcome, as an obstacle to education goals.

In his chapter on the home, Esolen strives to articulate something fundamental and great, something for which, as he points out, one does not have words to express, and, yet, is therefore all the more important. If Esolen's first important point is our loss of the ability to think, his second is the loss of our home. It is difficult to know which comes first or how the two reference each other. What is certain is that we hardly know what words to use to argue for the value of the family home in a world of working mothers, six week maternity leave, a 50% divorce rate, feminism, and so on. Esolen has already shown the ways in which school and work divide persons from their homes and that the home has become the place in which to fritter away the few hours at our disposal each day. In this chapter, he seeks to place before us an image of the home in all its richness, as the place where people, more than pursuing private interests, "*dwell with one another and for one another*" (162). He begins the chapter with the evocative image of a mother singing her infant to sleep, assuring him that he is safe in her arms, safe in their home. This assurance can be true only if the home—that is, the bonds of love between husband, wife and child that shape a house from the inside—is the most real thing, more real than any natural disaster, war, bureaucratic injustice, or educational system that might destroy the home. The child is safe not because nothing can break apart this home, but because what is being given in that moment is all that is necessary; it bears the shape of all that is human, it is the child's infinite resource for whatever comes in life; it is the background for all thought and language, although inexpressible in itself. Esolen uses images from his own childhood to remind us that in these early days the loving presence of a mother in the home, and through her the father's care and love also made present, the foundations for a child's sense of himself and the world are silently, imperceptibly laid. Moreover, as the child grows the family continues to provide a space of freedom shaped by love within which one learns to work and play for no other reason than love. At its best, the home is a shelter from extrinsic compulsions where the intrinsic forces are shaped into virtues and capabilities.

Esolen points out that at one time it was clear that all the wars a nation fought, all the commerce of a country, the education system and all else were to ensure that a mother could sit in peace and safety, rocking her child. Now, it would seem that many think the family exists so that we might have soldiers, and bankers, and clients for the schools. In this observation, Esolen has captured the heart of the problem: our inability to understand the family and the family home, and our consequent reordering of the family in the service of the state and the economy. Esolen's book does a fair bit of good in opening up paths for thought on the many issues that are involved in this tragic reversal. It is certainly a book I could share with my friend to help us both think more about what it means to educate our children.

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What is virtual reality, really?

PETER CASARELLA

Mary Timothy Prokes FSE, *At the Interface: Theology and Virtual Reality* (Tucson: Fenestra Books, 2004).

The worldwide web was a little more than ten years old when this book first appeared. Eleven years later, there are a plethora of books on cybertheology.[i] When I first read this book, I was still mulling over the hypothesis that the ever changing new mechanisms of voiceless electronic communication might become a new norm for human interaction. Today that form of questioning seems naïve, for a new generation is growing up in a world saturated with social media in a way that was inconceivable even at the very beginning of the millennium.

What kind of problem is virtual reality? It does little good either to hyperventilate about its excesses or to accept its ubiquity as a *fait accompli*. At the root of the problem lies the question of the essence of virtual reality and the uncovering of a proper method for making a judgment about it. What can something *be* that claims by its very definition *not* to be real? If virtual reality has always been something available for one's use, then how can one seriously raise a question about what and how it really *is*?

In appealing to the revealed Word, Prokes focuses on the theology of the flesh in the Eucharistic theology of John 6 and the embodied mutuality of the farewell discourses in that gospel (14□17, 86□87, 96, 122□23, 127, 138). Jesus' offer of "real food and real drink," she notes, remains a paradigm throughout his ministry of hospitality in Galilee and into his Resurrected life (86□88). Even the intimacy of the marital act does not compare with the offer to live within God that takes place when one receives the other as *real* food and *real* drink (96). The lure of virtual worlds collides with this teaching: "Participation in the increasingly sophisticated forms of 'the virtual' ...can bring about a disorientation and *loss of the capacity to know the difference between the real and the unreal, at least for a time*" (124). Moreover, the cybernetic theories of bundled information negate Christian personalism's continued openness to hylomorphism and thereby call into question the critical notion that we are whole persons as an embodied presence in the world (18, 46).

Another particularly insightful section regards the attempt by virtual reality to overcome transparent boundaries. It is not uncommon to link the disembodied nature of virtuality to a breakdown in real symbolic presence. But Prokes goes one step further. She unpacks how the confusion or blurring of presence and absence has consequences for other domains of life:

Literally, to cross the interface between persons, divine or human, is the ultimate call of every human being. Heaven is described as seeing God "face to face." This cannot be contrived, "called up" technologically.(74, cf. also 160)

Presence is a self-communication of love in the real interaction of persons. It cannot be replicated by other means. In Christ the sign and the mystery coincide. This witness goes beyond human

understanding, and it points to the real deficiency of substituting carnal with virtual encounters. In the latter, material sign and personal self-communication have been transformed into a de-materialized presence and its projection through a networked system that we call “cyberspace.” The medium is not thereby demonic, but its hyperextension of boundaries stands at odds with the beautiful fleetingness of an off-screen facial gesture or the physical caress of love. If “interface” with God entails “perichoretic indwelling and compenetration” (160), then the virtual path to this form of encounter remains rather ambiguous.

The question of the essence of virtual reality still haunts us and raises questions about the topicality of truth in the age of the internet. In his letter to sculptor Eduardo Chillida of 1969, entitled “Art and Space” and originally available only in a limited edition of 150 copies, Martin Heidegger reflected on the plasticity of Chillida’s work of art. Heidegger wrote: “The Plastic arts: the incarnation of the truth of being in a work that establishes places [for the truth].”[ii]

A sculptor throws into the world an expressive form. It takes up space with its own specific materiality, and this space crafted by hand is then placed with necessary deliberation into a visual space. Michelangelo, for example, drew from the quarries of white marble in Carrara in order that his “David” could be placed on the roofline at the east end of the Florence Cathedral. The space and materiality of the work of art speak to its truth. These acts of making space are precisely the dimension of the work of art that attracts Heidegger’s attention in speaking to the event of truth that transpires in the plastic arts.[iii]

Virtual reality cannot imitate this truth because it is bereft of such localities of truth. Does it open up a new, immaterial venue for the event of truth? Its seeming boundlessness in space and time is its very appeal. Heidegger and Chillida agreed that spaces are not by definition empty but available for being indwelt by events of truth. The internet empties space of this kind of event.[iv] I would not say that this emptying is by itself an emptying of life of all meaning. But the incarnate truth of which Heidegger spoke is clearly invalidated. The real question is whether and how deeply we need to encounter truth incarnately.

The perspicacity of this work lies both in the author’s sapiential mode of questioning and in the cogent way that the author turns to revelation for a response. It has already achieved a prophetic importance that can only continue to grow over time.

[i] See, for example, Antonio Spadaro, S.J., *Cybertheology: Thinking Christianity in the Age of the Internet* (New York: Fordham University Press, 2014). Spadaro says that he first began to think about the question in 2010.

[ii] Martin Heidegger, *Die Kunst und der Raum* (Barcelona: Herder, 2009), 32. Translation my own.

[iii] According to Heidegger: “Räumen ist Freigabe der Orten [Making space is the free offering of places]” (*Die Kunst und der Raum*, 22).

[iv] See Alejandro García-Rivera, *The Community of the Beautiful: A Theological Aesthetics* (Collegeville, MN: Liturgical Press, 1999), 65–74.

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For the Sake of Knowing and Loving God

RACHEL M. COLEMAN

Jean Leclercq OSB, *The Love of Learning and the Desire for God: A Study of Monastic Culture* (New York: Fordham University Press, 1982).

When speaking of the history of West, especially of the time between the fall of the Roman Empire and the Renaissance, it is often said that St. Benedict and the monasteries that sprang up throughout Europe founded upon his Rule preserved and saved culture. What does it mean to say they “preserved a culture”? The depth and breadth of their work in this regard is astonishing, but it is not easily grasped in an age like ours which has so little contact with monastic life. The monks were not antiquarians or curators of museum pieces from antiquity, let alone mindless scribes, slavishly copying dead manuscripts. To the contrary, their education, life, and work was a preserving of and a participation in a living tradition, animated by a very particular principle.

In *The Love of Learning and the Desire for God*, Jean Leclercq offers his understanding of the animating principle of monastic life: every action taken and every thing known and preserved is for the sake of knowing and loving God. The *quaerere deum* is the monastic principle *in nuce*. Leclercq, in this series of lectures delivered to fellow monks, endeavors to flesh out what this animating principle has meant in the history of monasticism. These lectures are an extraordinary survey of monastic life and culture, but here I will concentrate on three related themes: freedom of thought (I), conversion of the world (II), and liturgy (III).

I. Freedom of Thought

In medieval monasticism, education followed a certain order, and certainly gave attention to some topics over others, but the monks’ education was never restricted such that there were subjects or books within the intellectual tradition they were absolutely forbidden to read. In fact, precisely because the monks knew that everything they learned was entirely at the service of God, they were free to pursue avenues not explicitly spiritual or theological. A large part of any monk’s education was the learning of Latin, or what Leclercq calls “grammar.” Grammar was necessary for two reasons: first and foremost to be able to speak, think, and otherwise use the language of the liturgy, the language in which the worship of God was conducted. Second, Latin was necessary in order for the monks to be able to read not only the spiritual masters, but many other authors as well. Almost every monastery had a library that included Virgil, Horace, Ovid, and other pagan authors, even as these same authors did not have Christ in mind as they were writing. We should not take this fact for granted: the freedom we presently experience in education is something bequeathed to us by this freedom of monastic culture in the pursuit of knowledge. Because Christ is the Logos of the universe, and because God is the author of creation, we need not shy away from what is true and beautiful, even if not explicitly dedicated to God himself. Indeed, what is true and beautiful is always helpful in the search for God. Monastic life, ordered as it is to God, grants the monks the space to study any number of subjects and authors without having to worry about stepping into temptation. It is the very order of their lives—the order of the Rule

of St. Benedict—that gives them this incredible freedom of thought.

II. Conversion of the World

This leads to my second point, the monastic desire for the world's conversion. Now, this does not mean that the monks went out evangelizing; the movement of the monasteries was rather more centripetal. The conversion of the world took place *in* the monasteries, in and through the monks themselves. They tilled the earth and worked the ground in order that their place could image the Garden of Eden. This is not to say the monks thought they were creating an earthly Paradise—their sights were firmly fixed on the next world. However, in their labor, the monks were already participating in the heavenly kingdom. Similarly, in education, the monks understood their reading and learning to contribute to the conversion of the world. Leclercq reminds us that “to understand things is to realize the relationship they have to Christ” (139). Thus, the simple act of knowing a thing is itself transformative, for both the knower and the thing known. In addition, everything read and studied was converted precisely by being read and studied by Christians—i.e., the monks. Thus, in a way, the pagan authors became Christian in and through their readers. The writers of antiquity, says Leclercq, “were made comprehensible and useful to men who lived in an environment totally different from their own. The authors had really been ‘converted’ to Christianity” (119). Not only did monastic culture generate a freedom in recovering and reading the authors of the past, but a kind of duty as well: all of history achieves its conversion in the Body of Christ, here incarnated in individual Christians.

III. Liturgy

The third and final point, and a point that must be brought up in any discussion of monastic culture, is the importance of the liturgy. The liturgy is of course not outside of the previous two points, but rather their *telos*, the end toward which education and conversion reach. Ultimately, for the monks, love is the form of knowledge. If all their action is for the sake of knowing God, then it should be clear why the liturgy is the apogee not only of their education, but their entire life: in the liturgy we express and incarnate our love for God, and in the liturgy all earthly beings and knowledge are brought to their culmination in the service of worship of God. “The whole monastic economy was organized around a life in which leisure for praising God absorbed a great amount of time” (249). Education, far from being extrinsic, rather achieves its own *telos* in liturgy. Everything learned and worked for, everything true and beautiful—from whatever source gained—is allowed to be its most full, actual, and beautiful self, in the praise and worship of God. “In the liturgy,” writes Leclercq, “grammar was elevated to the rank of an eschatological fact” (251).

Monastic culture, then, far from escaping the world, as some have accused it, plunges right into it with a freedom only possible when one's life is ordered by the *quaerere deum*. Every thing learned is learned for the sake of the thing itself, and also for the sake of knowing God. There is no competition between these two goals, and the monks knew this to their core. This principle—that every thing achieves its most true and beautiful self in God's light—has been handed down to us and continues to fructify our learning today. Education is not simply the preservation of material, but is, at its core, the *quaerere deum*.

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Conversations Unplugged

JULIANA WEBER

Sherry Turkle, *Reclaiming Conversation: The Power of Talk in a Digital Age* (New York: Penguin Press, 2015).

In his message for World Communications Day 2015, Pope Francis noted, “The great challenge facing us today is to *learn once again how to talk to one another*, not simply how to generate and consume information.”^[i] That directive is precisely the purpose of Turkle’s extensive research and sensible advice in the present book. Turkle is a trained sociologist and clinical psychologist, and she has studied people’s relationships with technology for more than thirty years. What concerns her is the loss of face-to-face conversation in favor of convenient but superficial connection via technological devices. While she sees and defends the many benefits of technology, she also argues that we master our all-too-indulgent devices (and ourselves), so that we don’t miss out on deep relationships with our fellow human beings.

The centrifugal pull away from conversation into our computers is a pull toward “distraction, comfort, and efficiency” (9). Immersed in this way of being, our brains rewire themselves, and we become what we think (110). Some people are so caught in this mental state—and are therefore so uncomfortable being without distraction—that in one study, people chose to administer electrical shocks to themselves after just six minutes of boredom (10).

Whatever happened to the joy of solitude? The solitude of daydreaming is not the same thing as surfing the internet for distractions *outside* ourselves (25). It is within solitude that you learn who you are, so that “you can see others for who they are, not for who you need them to be” (46). Solitude gives us to ourselves in “self-consciousness” and “self-determination,”^[ii] so that we can give ourselves away to others in relationships.

Perhaps it’s so hard to be alone because as a society we are so lonely. “Attachment enables solitude” (65). We need to talk to one another again, seeking to bond on a deeper level. “If we make space for conversation, we come back to each other and we come back to ourselves” (14).

Should we fail to do so, it is alarming to consider that the next generation might not realize what it is they are missing. Children sometimes doubt whether their parents are more resourceful than the internet and some actually prefer to search the internet. They want just the facts, not “lifelong relationship” (116). However, internet searches can only result in what you ask for—what you know you’re missing, that is. Left to their own devices, can children come to the conclusion that they are missing out on conversation?

Sadly, there’s also a movement toward robotic intimacy. “People tell me [Turkle] that if a machine could give them the ‘feeling’ of being intimately understood, that might be understanding enough. Or intimacy enough” (52). Perhaps “talking to a machine doesn’t feel like much of a downgrade” because we have developed “habits that have us treating human beings as almost-machines,” Turkle points out

(345). Besides, people spending large portions of their lives with machines are practicing interacting with machines—it's what they know, and it's safer than the unpredictable nature of human interactions (352). Is it any wonder that some people end up ultimately preferring the robots?

If conversation is taken to mean a dialogue that is “open-ended and spontaneous, conversation in which we play with ideas, in which we allow ourselves to be fully present and vulnerable,” then even in communication with other humans, technology is often at odds with conversation (4). “To converse, you don't just have to perform turn taking, you have to listen to someone else, to read their body, their voice, their tone, and their silences. You bring your concern and experience to bear, and you expect the same from others” (45). Technology always hampers parts of this. Texting, for example, deprives us of eye contact, body language, tone of voice, facial expressions and so much presence; messages can be edited without an awkward pause; and they can be ignored entirely, unlike a person standing before you.

“Without conversation, studies show that we are less empathic, less connected, less creative and fulfilled” (13). School aged children are at least as affected as the modern office worker, whom we will address next. Students are not as emotionally developed as their same-age peers of previous generations (5). One study found a “40 percent drop in empathy among college students in the past twenty years, as measured by standard psychological tests,” and, although alternative explanations are possible, the authors of that study suggested that the decline could be attributed to a decline in face-to-face time among students (171). Other studies “show a decline in the ability to form secure attachments—the kind where you trust and share your life” (180). Students form superficial relationships, lack empathy, and don't seem that interested in one another (161). They are “rushed, impatient, not interested in the process, unable to be alone with their thoughts” (76), and “can't concentrate” (164). Where time with people teaches children to be with people, time with the computer teaches children to be with their computers (7), so what they tend to talk about with their peers when they finally get around to it is, well, what's on their phones (161).

The modern workplace is no better. Here communication comes “in a relentless stream” that keeps people “scattered and *dependent*” (279, emphasis in original), but then employers aren't paying people to stay calm (280). They aren't paying people to stop checking work emails and texts after hours either. So instead of staying calm, and instead of being an individual with a face and a personal presence, employees differentiate themselves the only way that technology allows—by working faster and for longer hours (288). Even though “the experience of boredom is directly linked to creativity and innovation” (39), employers and employees will need a complete change of mindset before boredom will be allowed back in the building and employees leave their work at work.

The fact that this frenzied, hectic state follows us everywhere damages every other area of our lives. The simple presence of a phone (even turned off) on the table lightens the dinner conversation, since we think we might be interrupted (21). “Every time you check your phone in company, what you gain is a hit of stimulation, a neurochemical shot, and what you lose is what a friend, teacher, parent, lover, or co-worker just said, meant, felt” (40). It is no wonder that the children of the smart phone generation—now graduating from college—want conversation to be something they can drop in and out of (a.k.a. superficial), seek out multitasking (addictive as it is), and have trouble with depression, social anxiety, and reading human emotions (42).

Entire lives are disintegrating, but we might not notice, since we are simultaneously losing the ability to tell a coherent story. People tell stories according to the medium at hand, which means we tell stories likely to be ‘followed’ on Twitter or ‘liked’ on Facebook, neither of which media allows for very complex

stories (89). Unknowingly, our ‘friends’ and ‘followers’ are training and rewarding us for telling our life stories in entertaining and superficial ways (95), to put on our best faces (109). This is wholly different from the way conversations unfold, always unique to your history and to the history of the person with whom you are speaking, opening us to a much deeper self-understanding (98). Conversations encourage listening, respect, and talking through deeper feelings (109).

Exacerbating the problem of not being able to tell stories, the multitasking lifestyle “puts us into a state similar to vigilance, one of continual alert” in which “we can follow only the most rudimentary arguments” (257). The ability to follow arguments and to tell stories is necessary to understanding history, having a context for the information you find online, and for making a democracy work (222). Following an argument or a story would also make it more likely that someone could see the dangers of a phone that always offers more distractions, more neurochemical hits.

Turkle peppers the book with sensible recommendations for parents, schools, and employers. One helpful solution Turkle suggests is putting pressure on technology developers until they offer us something different, something that isn’t “designed to keep us at our phones” all day (126). For individuals, the way forward is clear to Turkle: “*Protect your creativity. Take your time and take quiet time. Find your own agenda and keep your own pace*” (319). Make your use of technology intentional, limited to the times when it frees you to be present to the humans around you. Then, practice being present to yourself and to others. Practice conversation.

[i]
https://w2.vatican.va/content/francesco/en/messages/communications/documents/papa-francesco_20150123_messaggio-comunicazioni-sociali.html.

[ii] John Paul II, *Man and Woman He Created Them*, trans. M. Waldstein (Boston, MA: Pauline Books & Media, 2006), TOB 6:2, p. 151.

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Which of These Is Not Like the Others: Followers, Likes, Views, and Education

EDWARD TRUDEAU

Add Sugata Mitra to the list of technology idealists who believe that the world is poised on the brink of an educational revolution because of the Internet. In 2013, Mitra delivered a TED talk explaining his vision of a “School in the Cloud,” in which students teach each other in small groups with a shared computer and nothing more than a moderator to “pose the right questions.”^[i] In Mitra’s vision, there is nothing left of the school except a health and safety moderator—everything else is online. Nicholas Carr published a list of quotes from such idealists, each of whom believed he was putting the epitaph on the tombstone of classroom education as it has hitherto been known in the US.^[ii] The list is headed by an 1885 prediction from Yale professor William Rainey Harper that students of correspondence courses would soon outstrip their classroom counterparts. Similar forecasts accompanied the emergence of the phonograph, the radio, the movies, television, personal computers, and the web. Today, the underwhelming effect of massive online open courses (MOOCs) goes politely unmentioned as we discuss the enormous potential of one-to-one technology programs revolutionizing education.

Modern society has endless optimism that technology can solve difficult medical, environmental, and socio-economic problems, and therefore many people assume we need only “find the cure” to radically transform education. The current race to saturate schools with wireless access and get tablet devices into student hands is only the latest manifestation of that optimism, and there is no shortage of studies and opinions on the benefits of such technology to justify that opinion. The Internet is awash with reports on how to improve access to education, close the achievement gap, increase student engagement, and attain better educational outcomes through technology. Any improvement in student test scores under these programs is cited as evidence, but technology idealism runs so deep that lack of improvement or even decline in academic performance is not typically considered a negative indicator.

In October of 2015 the Organization for Economic Cooperation and Development (OECD) released a comprehensive, international study on technology in the classroom across their 34 member and partner countries.^[iii] The results of the study are almost universally disappointing with respect to achievement, showing declining performance in both reading and mathematics test scores as classroom technology use increases beyond a minimal amount. But OECD Education and Skills Director Andreas Schleicher remains undeterred. In his foreword to the study, he notes: “Still, the findings must not lead to despair. We need to get this right in order to provide educators with learning environments that support 21st-century pedagogies and provide children with the 21st-century skills they need to succeed in tomorrow’s world.”^[iv]

Schleicher’s attitude is common among proponents of increased classroom technology, but it is awash with questionable assumptions. It assumes that 21st-century educational goals are distinct from those of earlier centuries. It presupposes that classroom technology will be able to deliver on those goals. It implies that these goals are so critical that it is either worth experimenting on yet another generation of school children to “get this right,” or that failures will not be significant enough in these children’s lives to warrant holding off until we know more. As hard as it is to grant that any of these assumptions are

plausible, the greatest misdirection is reducing the problem to one of implementation, as if other supposedly more difficult issues have already been overcome. In fact, poor implementation has been blamed for every type of failure in classroom technology, including inability to change school culture, insufficient logistical planning, lack of consistent pedagogy, poor professional development, lack of device security, and short supply. The term is applied so widely that one wonders whether the underlying assumptions have ever been addressed.

But the race is now on. As more schools adopt technology-assisted education, the pressure on neighboring schools to keep up increases every year. Schools turn to the private sector for help in selecting and implementing programs, but the clear conflict of interest in making enormous hardware and support sales can actually contribute to failure. The billion-dollar LA school system one-to-one iPad program that began in 2013 was plagued with implementation problems that generated a litany of complaints. The Hechinger Report published a post in September of 2013 that cited a lack of teacher professional training and poor planning as two critical failings reported by consultants who had worked on the implementation.^[v] The program was eventually scrapped when investigators uncovered improprieties in the bidding process.

Despite this and other highly publicized failures, students and parents still appear to be motivated by the promise of technology in their educational program, even if they end up having to pay extra through taxes or tuition. Schools that issue devices or rely on classroom computers also need technology refresh contracts to keep their devices current, since students grow less impressed with school-issued equipment the more they acquire digital devices at home. A 600-school survey found that British secondary school students were becoming “indifferent” to tablet computers.^[vi] With the average age of first internet use now well below the age of 9,^[vii] that comes as no surprise, but it adds to the strain on teachers and funding.

College Park Academy (CPA) is a Maryland public charter school built around an all-online model that has high technology needs. Students still assemble in classrooms in a building, but every student sits at a computer and studies from Pearson Education’s Connections Learning online curriculum under the guidance of classroom teachers. Teachers hired for the program receive one week of professional development, which is much more than most schools offer. They also have broad flexibility in how they choose to manage the online curriculum and classroom activity. Pearson Education lists the program as a success story, citing higher test scores than other county public schools as proof of its effectiveness.^[viii] However, as with many new programs the situation is more nuanced. The initial requirements for self-paced learning included time management skills and self-discipline that left some students struggling. Proponents of the school tend to categorize these as “growing pains,” but one parent revealed that the practical difficulties introduced by differences in these skills among students encouraged teachers to revert to a more synchronous classroom. Any new curriculum will take time to mature, but authentic growth indicates that it is continuing to perfect itself, not retreating from its ideals.

At the other end of the spectrum are schools that give very broad latitude to teachers on how much technology to use in the classroom. Students may be allowed or required to bring a device such as a laptop or tablet for note taking. DeMatha High School in Hyattsville, Maryland has chosen this approach, and also provides a “cart” of laptops that may be moved from room to room for periodic use. These can close access gaps for students who do not own a device, but students and teachers do not rely on them since they are not individually assigned. Most importantly, teachers are free to exclude technology in their day to day lesson planning. Students at DeMatha have mixed responses to this policy, but don’t see it as a barrier to learning. When asked, some students accused teachers who chose

not to use technology of lacking sufficient skills, but one of the most technology proficient teachers at the school uses technology minimally and has argued against its widespread use.

Between these two extremes lie one-to-one technology programs in which every student receives a device, but the school does not commit to a single online curriculum. These programs tend to provide little or no professional development and preparation, but strongly encourage teachers to incorporate the technology into their lesson planning. St. John's College High School in Washington, D.C. is now in its second year of a one-to-one tablet program, after a successful pilot program with a subset of students under the direction of an educational technology consultant. Equivalent or slightly improved test results after the pilot encouraged school administrators to make the transition school wide.

At first, widespread tablet use was ironically a step backwards in productivity. The fastest and most accurate form of input for modern computers is the keyboard and mouse. Some impressive innovation has made incremental improvements on these two basic devices, but for pixel-perfect accuracy and to achieve faster-than-writing text entry, they are indispensable. Unless students supplement their tablets with a hardware keyboard and sit at a desk or table, data entry of any form becomes slower and more error prone than writing in a notebook. Nevertheless, one student reported that more than half the students using tablets to take notes in her class typed with their thumbs or index fingers using the on-screen keyboard. This habit continues into homework, where students often have the additional burden of having to switch between apps to refer to source material when writing essays. It is also typical to see them writing with an index finger to solve math problems or construct diagrams, even though other apps may be installed to make more accurate diagrams. While one might argue that students could switch to a computer to compose responses, set up a better study environment in which they use an external keyboard and mouse to do more accurate work, or use tools like stylus and straightedge designed for an iPad, ultimately these are only poor attempts to recreate the freedom students already have with pencil, paper, and ruler.

Reading on tablets and laptops can also cause a decline in performance. Electronic textbooks have become a staple in many one-to-one and online programs as a cost savings, a convenience, and a nod to technology. However, research on electronic reading has highlighted a decline in comprehension. In December of 2012, a study from the University of Norway found that “students who read texts digitally were more likely to receive lower scores on the reading comprehension tests compared to the students who read the texts on paper.”^[ix] A similar study published in March, 2015 at UCLA surveyed undergraduate reading preferences and discovered, “overwhelmingly that they prefer print over electronic formats for learning purposes,” but numerous factors contribute to the way they actually read.^[x] While the Internet-enabled device promises the world seen through a ten-inch window, the constant tapping, scrolling, and pinching is the reader's desperate attempt to patch together a field of view that approaches what a desk or table-top provides effortlessly.

The extreme portability of the tablet further encourages a “study anywhere” mentality, the practical result of which is that students do not sit at a desk or table with materials surrounding them in a dedicated study environment, but rather steal a bit of time here and there to do work. It is not a new phenomenon for students to try and get work done as quickly as possible, but mobile devices encourage multitasking in a much more invasive way. Whether in the classroom or while doing homework, screens deliver distractions designed to fit into the white space when students believe they do not need to devote their full attention to the content.

A Microsoft Advertising study published in the spring of 2015 cited Statistic Brain's claim that the average attention span has declined from 12 seconds in 2000 to 8 seconds in 2013.^[xi] However, the

“good news” reported by the study authors was that people are “becoming better at doing more with less via shorter bursts of high attention and more efficient encoding to memory.”^[xii] Without any further context for this statement, one is left to wonder whether this is the chicken or the egg. Perhaps online readers are better at assimilating information quickly because it is being shortened and simplified for digital consumption. The mentality that produced the acronym TL;DR (Too Long; Didn’t Read) has become so ubiquitous that some authors are anticipating their readers and providing TL;DR summaries at the head of their articles, making the thoughtful consideration of their argument appear superfluous. There are inherent limitations to the compressibility of information; nuanced arguments cannot be well communicated in a series of 140-character quips. A consultant who assisted with the St. John’s one-to-one program concurred. When asked what he thought was being lost by introducing devices, his response was the ability to conduct long-term sustained research, an activity that he surmised would be confined to a specialized few in the future. The average reader, he thought, would be satisfied with a Google search or a Wikipedia summary to get a rough, working understanding of most subjects. Unfortunately, questions that have deep impact on human life do not have answers that can be looked up in a search engine.

Major social media sites like Facebook and Twitter, as well as messaging apps of all forms, rely on declining attention spans and the sense of hopeful urgency created by notifications to build ever more irresistible distractions. The Microsoft study encouraged advertisers to take advantage of the moment when attention lapses to steal a user away from his current task. Of “multi-screen” users they note: “Since consumers turn to their secondary screens to fill in those in-between moments when they might otherwise drop off completely, they’re more engaged overall and already primed for immersive experiences.”^[xiii] With modern operating systems, however, any tablet or laptop acts as if it were built of multiple screens by promoting notifications in the viewer’s peripheral vision. “Multi-screening,” notes the researchers, “trains consumers to be less effective at filtering out distractions—they are increasingly hungry for something new.”^[xiv] Unless a school takes measures to completely block all communication and notification apps—a Herculean task given the number and turnover of such programs—teachers and texts will be in constant competition with what students are discussing in their social apps.

Controls that limit access to messaging apps and diligent surveillance by teachers can minimize the disruption caused by devices, but the irony is that such measures are effective only insofar as they cripple the capabilities of the device. Better would be training in time management and study skills that encourage students to better focus, but although this was a stated goal of the St. John’s program during its first year, no such specialized instruction has yet been implemented. Reportedly, additional technology controls are to be introduced in the future to limit non-academic use, but even if so, technology will once again be invoked to solve problems it amplified in the first place.

NYU professor Clay Shirky studies the effect of the Internet on society. He observes that, “There are some counter-moves in the industry right now—software that takes over your screen to hide distractions, software that prevents you from logging into certain sites or using the internet at all, phones with Do Not Disturb options—but at the moment these are rear-guard actions.”^[xv] With the entire industry focused on distracting, engaging, and immersing online readers, it is a losing battle to attempt at once to put the Internet at the service of classroom education and restrict the uses of devices to focused academic pursuits. At McMaster University, researcher Faria Sana and her colleagues studied the effect of laptop multitasking on lecture comprehension, and found that students who engaged in laptop multitasking performed 11% worse than their peers.^[xvi]

The research on the illusion of multitasking is extensive and convincing: switching between tasks

rapidly decreases performance and retention, but gives the multitasker a deceptive feeling of improved productivity. Like drivers who believe that intermittent texting does not impede their focus, students report that checking text messages has little to no impact on their understanding of classroom discussion. Nonetheless, Shirky arrived at the controversial decision to exclude electronics from his NYU classes. “Allowing laptop use in class,” he wrote on a September, 2014 blog post, “is like allowing boombox use in class—it lets each person choose whether to degrade the experience of those around them.”^[xvii] Shirky cites Sana’s study as proof. In a second experiment, the researchers found that students *in view of multitasking peers* dropped 17% in post-lecture test performance. In other words, they suffered more than the ones who were actually doing the multitasking.^[xviii] Like the multitaskers themselves, those students reported that they were “barely” affected by their neighbors.

Shirky’s device ban is not unheard of in college classrooms, but it is prevalent in primary and secondary schools. In both one-to-one programs like St. John’s and bring your own device schools like DeMatha, cell phones may still be confiscated if students use them during class time. Researcher Danah Boyd sees this as nothing new, however, and believes that trying to solve it by limiting device use is just the latest episode in the teen-adult power struggle. Her book *It’s Complicated: the social lives of networked teens* contributes an invaluable perspective in the voices of the teens she interviewed across the US for ten years, but often reads more like a manifesto than a report. She writes that adults blaming technology is a misdirected attempt to address the timeless issues of teen rebellion and parental limits: “As teens seek out new spaces where they have agency, adults invent new blockades to restrict youth power,”^[xix] she writes. If it is difficult to view parental limits on the devices they buy for their children as a desire to remove agency, it is all the more difficult to believe that schools merely seek to exercise power over students when they ban devices for non-academic use. If technology is only making more obvious the perennial problem of student engagement, then it seems absurd to combat that issue by adding new sources of distraction.

Boyd is not a critic of American culture; she accepts technology, and in particular social media, as given. She does, however, attempt to argue for moderation in conversation about the appropriate use of technology by youth. Her arguments would be more effective if she did not tend to dismiss critics like Carr as Chicken Little while arguing that “digital celibacy” holds no more promise for happiness than digital engagement.^[xx] Better is her excellent clarity on the multiple and mistaken notion of youth as “digital natives.” If she sometimes makes too much of the intergenerational gap, she at least points out that teaching students about networked environments is a much better role for education than issuing devices, and asking all the same questions of online artifacts that we would ask of print forms is the central goal of producing literacy.^[xxi] It is simply not convincing that these skills require or even benefit from the use of a device.

We have a history of rushing to broadly implement solutions after minimal research, and then strategically backing down when they inevitably encounter unforeseen obstacles. This trend is plainly evident in our repeated experiments in US education. Perhaps it is our repeated failure to produce a reform, standard, or approach satisfactory to all critics that has encouraged us in desperation to try and minimize the effect of the only factor that has been shown time and again to be the most influential in education: a great teacher. In dark homage to Aldous Huxley, our ideal digital future is being envisioned as one in which teens socialize themselves in their free time and teach themselves during school hours. At the center lies an indifferent technology, supporting a networked public materialized out of the only semi-intentional interactions of a global society. The adults who built this digital world best serve their offspring by largely leaving them to their own devices so that they can reinvent the social order and produce, presumably, something which their parents cannot fathom. But technology is not indifferent. Each tool we produce, though it may be put to many uses, excels at only a few. In light

of our track record to date, it may be wiser, cheaper, and far more responsible to set aside devices and apps. The absurdities created by hanging so much weight on a technology that excels at disruption would be amusing if it did not constitute yet another distraction from the deep educational goals of clear thought, reasoned discourse, critical reflection, and respectful discovery.

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technologies in family life and education.

The Use of Technology in Home Education

KENNETH NOSTER

In 1989 our family began home schooling, and in 1992 we started working in home school administration, providing parents with advice, resources, planning and assessment. Obviously, between 1992 and 2016 computers and the subsequent array of devices and resources have contributed to great changes, but it is equally true to say the elements that make learning at home most effective have remained virtually unchanged. We will look at these elements and consider how they are most effectively applied, both with and without technology. We will also observe general use of technology, identifying the advantages it provides to learning as well as some cautions and significant ills.

As late as 1995, many homes did not yet have a computer, and only a few home schooling parents were using email. The internet was growing rapidly, as was its reputation for providing uncensored information and images. Professional educators were adamant that the quickly escalating place of computers in the world meant every child should receive training in computer use as early as possible. Consequently, while elementary schools were installing computer labs, many home schooling parents, though reluctant to invite the world into their living room, were concerned that their children would be significantly handicapped if they delayed computer access. In order to discover just how disadvantaged these students would be, we began consulting with individuals teaching state-of-the-art college courses in computer programming.

The consensus was surprising: Students who had arrived at college with little or no computer background, by end-of-term out-shone and out-scored their classmates who had begun the course well experienced in the use of computers. The teachers consistently cited the same cause. Confident computer users, relying on what they perceived they already knew, listened briefly to instructions and glossed over reading material, impatient to begin fulfilling the requirements of each assignment. Students would already be tapping away at their work while the teacher was still instructing. On the other hand, the neophytes, recognizing how little they knew and how much they had to learn, did not miss a single word of what the teacher said. Today, almost two decades later, the distraction level in computer labs has grown and, sadly, neophytes are now rare; but our advice to parents remains the same: "Your child will not be handicapped by delaying computer use until relatively late."

Although it was reassuring to discover that later introduction of computer skills does not handicap children, skill development may only be part of the reason parents want to use computer technology. Especially with software advances of the past decade, there are many academic tools one may have difficulty accessing any other way.

One such academic tool is the online classroom. It is the means by which we have been able to introduce and nurture the method of discussion that forms the heart of a classical education: Socratic dialogue. Reading classical texts and listening to lectures provide great benefit, and a student best internalizes and applies the inherent universal truths when required to articulate meaning and impressions to peers, meanwhile trying to understand and evaluate the impressions provided by others. Originally, all universities engaged learning in this way, and a few of the most successful still do, but the approach is rarely used with school-aged children. By the late 1990s it had become increasingly

clear that this ancient approach to learning was very well suited to home education, and a number of families began reading and discussing the classics. What soon became apparent was that, although parents were committed to giving their children a classical education, many lacked the time and experience required to introduce effective Socratic dialogue. They sought means to access tutors well-versed in Socratic dialogue and large enough groups of peers to stimulate rich discussions. But this was not easy.

The mechanics of gathering far-flung participants together on a regular basis made classes in Socratic dialogue virtually impossible to achieve in many home school settings, until the advent of the online classroom. Then, suddenly, any student with internet access could join other students and some of the world's best tutors to pour over the works of Homer, Aristotle, and Aquinas. The effects were astounding. As would be expected, good students blossomed, but we were quite surprised by many who had long since lost interest in education. Within one term, they became increasingly motivated to read, discuss, and learn. Though improvements in technology have made online dialogues more seamless, little else has changed. The discussion of great ideas remains the key to learning and, as a communication tool, the internet continues to facilitate this most powerful means of teaching logic and rhetoric. Meanwhile, the internet can also provide access to other kinds of learning.

Whether online resources address traditional academic subjects or have to do with enrichment materials, there are many to choose from; some at a cost and others free. The internet hosts courses in virtually all subjects, and of particular help to home schoolers are those that provide rigor in high school Sciences and Mathematics. For home schoolers wanting more than the basics, the internet hosts enrichment for every possible curriculum. Each year, more resources become available, and students go online for academic research. This is both a good thing and a potentially harmful one.

On the positive side, the internet can serve as a library at your fingertips, making access to even obscure information as simple as pulling out your phone. On the other hand, this virtual library can also be very distracting, drawing a would-be researcher through one link to another, wandering far from the initial inquiry and likely to fall upon sinister sites. An equal handicap for the serious researcher can be the inconsistent reliability of information one may draw from postings emanating from a great variety of sources.

Parents, aware of these difficulties, attempt to create a balance by using libraries and other non-digital resources, but the personal device is ever more present, and it is difficult to create balance in a world increasingly dominated by technology. Life was simple when limits meant turning off the TV, or even getting rid of it. Initially, computer use could be more easily controlled and limited, but as it became increasingly used for work and study, the lines between use and abuse became less well defined. Now, surrounded by technological devices, it is increasingly possible for families to become dominated by them, and harmful internet content is no longer the only reason parents have for concern. What began as a desire for balance and avoidance of evil must now extend to recognizing that a child's capacity for healthy physical and cognitive function can be altered by time spent on electronic devices.

In referring to time spent on any device the term "screen time" is catching the attention of mainline media due to the effects of electronic devices on mental and physical health. Not all screen time is the same. There is a great difference between simple "work" screen time and that which is interactive and provides immediate rewards. This includes social media and many phone apps.

A small child sits on the floor with her mother's cell phone in hand, with her forefinger tracing letters of the alphabet and receiving a cheery chime each time she does it well. Another child, slow to start speaking, gains positive reinforcement each time he taps on the correct square in response to the

friendly digital voice listing basic colors. These games seem innocent enough, providing young children with academic advantages while mom is busy teaching an older child or feeding the baby, but a great deal more lurks under the surface. Whether at this basic “educational” level or with more complex games, the human brain responds very differently to the most simple of virtual rewards than it does to basic work, even if the same device is being employed.

With young people of all ages, anything more than half an hour per day of interactive screen time with an entertainment or social focus seems to be the tipping point for development of addiction. In *Psychology Today* Victoria Dunckley, M.D. writes: “Many children are ‘hooked’ on electronics, and in fact gaming releases so much dopamine—the ‘feel-good’ chemical—that on a brain scan it looks the same as cocaine use. But when reward pathways are overused, they become less sensitive, and more and more stimulation is needed to experience pleasure.” Dunckley relates depressed mood, lack of motivation and poor memory to the resulting levels of unnaturally high arousal and firmly recommends an electronics “fast” to reset the brain.

Adults, though perhaps more cautious, are as susceptible as are young people, and among the effects of being “hooked” on digital media is the steady increase in screen time among adults. *The average American adult user spends 5.6 screen time hours per day, half of which is on mobile devices.* It may be assumed that a busy home schooling mother simply would not have the time to spend on screen, but there is more than sufficient evidence to the contrary. Frequency of posts and immediacy of responses indicate the dominance by devices in many homes, and recently a mother expressed how much richer her life has become since she quit checking her phone first thing each morning. She confessed she simply couldn’t resist learning what she had missed during the night: the news, what others had posted, and whatever else one can learn from a phone. She was reluctant to change, but she had begun to realize how dominated by technology she had become. Even the simple rewards from information, posts, and personal texts had hooked her, and the process of withdrawal was difficult. Now that she has conquered the habit, she marvels at the wealth of experiences she had been missing: spending quiet time with her husband, tiptoeing in to watch her sleeping children before waking them, reading, and praying, even exercising. Now the phone, if she gets to it, is relegated to a status far lower than her own well-being and that of her family.

Among users of all ages, addiction places the electronic device at the centre of the person’s life, displacing many other things, but there are other kinds of harm that have little or nothing to do with addiction. Some may think that if personal devices aren’t being used for games or social media they will not have adverse effects, but there is more to these devices than the obvious reward stimulations.

The human brain reacts to all forms of input and is constantly programming itself to deal with and utilize each of them. When a child is first learning to become ambulatory, rolling over soon leads to creeping. The brain develops important pathways with each stage and a major one when the creeping turns into a crawl. Later cognitive abilities of the child will be found strong or weak based upon the simple crossing of the centre line that had occurred at the crawling stage. Much of what affects our brain as we grow has to do with the interaction between receiving, thinking, and doing. It is not a coincidence that children are physically very active during the period when most of their future cognitive ability is being developed. Use of technical devices supplies plenty of receiving, a little thinking, and even less doing. The resulting unbalanced development contributes to cognitive inabilities, especially in young children.

Very young children, two years old and younger, cannot distinguish between what is on the screen and what is real. Because of this confusion of realities, areas of cognitive development are crippled by

screen time of any kind, implying all devices should be avoided. With children two to five years old, sitting in front of a screen provides abundant visual stimulation with little physical demand. The pathways in the brain that associate visual intake with action become under-utilized while visual sensory pathways can become over-loaded. Of course, brain development is more intense in the young, but it is ongoing through adulthood, and the virtual reality of technical media affects that development.

Among the most intense developments throughout life, but especially formative among the young, is the social responsibility that emerges from daily interaction with other people (common decency) and the practical intelligence that results from living in the world (common sense). Both common decency and common sense are absent in an infant. They need to be learned, partly through instruction, but largely through real experiences. We learn to value others and treat them with respect when we ourselves are valued and respected, but we also learn the importance of these values when we experience disrespect and when we see in others the effects of our own unkindness. Failure teaches us at least as much as success: often more.

Common sense is gained in much the same way: some from the wisdom of our elders but a great deal by trial and error. One error and one suffering at a time, we learn that all actions have consequences for good or ill and that we are responsible for our choices. The combination of our common sense and our common decency helps us recognize our responsibility to act with prudence and have a positive effect on the world in which we live.

The more time a child spends time in a virtual world, the less time is available for real social and physical experiences. When normal social time is replaced by virtual reality, the child is allowed to avoid the hard work of socialization and instead be responsible to self alone, able to choose and control virtual interactions and not experience the negative consequences of selfishness. As for the neglect of common sense, the virtual world allows a child to be a hero without suffering, be reckless without real harm, and have absolute control over reality. The effects are immediate and translate directly to real life, where individuals resist virtues and are perplexed by a reality that demands they are not the centre of their universe.

According to hiring managers, the influence of time spent in virtual environments has had a profound impact upon individuals now aged 21 to 32. Compared to the previous generation, they tend to be more creative and open to change, but they are twice as likely to be driven by the reward of money, four times more narcissistic, and far less likely to be a team player. They are also less confident. These trends illustrate a lack of engagement with reality, and there is little reason to believe the next generation will do better. With much greater access to technology, the generation now aged 5 to 20 may become even more challenged in areas of common decency and common sense.

This is grave cause for concern, yet there are further areas of concern, including the effects of simply the amount of time spent facing a screen of any kind. Researchers are becoming alarmed at the impact that blue light has upon the viewer, no matter what is on the screen. Whether it displays a movie, a game, math lessons, or a simple screen-saver, the screen effectively mimics daylight. According to our natural day-night internal clock, our body anticipates bedtime by releasing the melatonin needed to slow us down and allow us to sleep. Even short durations of screen time can fool the body into delaying melatonin release by several hours. This, combined with the arousal stimulated by screen time, can rob children (and adults) of deep sleep. Lack of sleep contributes to fatigue and lack of concentration that in themselves cause unnecessary failures and lead to stress. Real stresses, combined with virtual ones, create a host of other problems, including irritability and even depression. **Increased risk of teen suicide has been linked to screen time,**

especially when used in the evening or night.

The other part of “screen time” is time easily wasted, and an abundance of missed opportunities. This is particularly true of students. At a time of great opportunity, when the luxury of learning has not yet been superseded by work and family life, it is a shame to spend large amounts of time on entertainment, gaming, and internet chat. It is also a shame to be formed by media more than by people, as many progressive educators propose doing. Even when Blackberry devices and iPhones were relatively new, educators began strongly promoting the use of personal devices in the classroom, proposing that students would become freer to learn. A perceived asset of such a system cites the use of personal devices as a solution to the immense social pressure students experience in the classroom. Bright students feel awkward about knowing the answers when the most popular students do not, and the majority of students fear mockery if they answer poorly or even at all. Personal devices would provide students with opportunities to answer questions privately and without peer pressure. Another proposed benefit would be access to the very best teachers even if they are not physically located nearby. Yet the proponents of such a system seem to have forgotten the power of discourse in the development of a person’s capacity to think.

Similar forgetfulness is demonstrated by parents who believe their child can be adequately home schooled in a cyber classroom. Although technology is able to avail students of resources not otherwise easily attained, the heart and soul of education lies in personal relationship. Meaningful discussions with real people will always trump even the most attractive virtual presence. Even online Socratic dialogue with a world class tutor, though it provides essential skills of dialogue and clear thinking, cannot replace a conversation around the supper table. Parents who take what has been gained through online courses and apply it to the domestic environment achieve something greater. Good conversations with thoughtful people are formative and produce modelling of behaviour, refinement of values, and opportunities to think out loud and debate ideas. Living with adults, having responsibilities, experiencing real work, and enjoying creative play are powerful educational tools that screen time can only hope to emulate and can never duplicate. Great books will always be superior to curricula, and conversations will always be superior to workbooks.

Probably due to the century-old bias that believes education is something that happens in particular places outside the home by people who are professionals, parents tend to underestimate the centrality of the home as a place of learning. They also tend to underestimate education’s most powerful tools, probably because they may appear familiar and ordinary. Institutional education gives the impression that it takes years to learn skills, knowledge and computation skills that can actually be achieved in months, given the necessary level of motivation and maturity. The world enthusiastically sells its wares, especially a plethora of technical tools. Each era produces new educational theories and methods, but too few utilize the most effective approaches ever developed, that fit naturally into ordinary life.

Ordinary family life, lived with care, provides the most effective means of learning and, at the centre of it all, open and engaging dialogue. Virtually unchanged since the ancient Greek philosopher Socrates employed a system of asking questions in order to draw students into deeper understanding and right-thinking, dialogue is the principal tool at the disposal of parents. Socrates didn’t write books or create texts: he lived with, discussed with, and discovered the truth with his students. Ordinary parents in their own home are very capable of doing the same. Technology, used carefully, need not dominate but can truly assist in the gathering of information and development of skills. It will be kept in check if parents remain confident and utilise their advantage of dialogue at the profound level of relationship. In spite of, or perhaps because of, its simplicity, the home is able to shape common decency, common

sense, and right-thinking. Ultimately, nothing should be allowed to replace the on-going dialogue that begins before birth and continues throughout life.

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The Elephant in the Living Room: What Few Are Talking About But What Is Absolutely Necessary for Authentic Educational Reform

MICHAEL S. MOYNIHAN

There is a crisis in education

There is a general recognition that we are experiencing a crisis in education, that we are not adequately passing on the riches of an authentic liberal arts education to the next generation, and that this will have dire consequences. While testing results provide a metric of this decline, many of the signs are obvious for anyone carefully observing our culture: the decline in reading substantial texts, especially books; a general lowering of the public level of discourse with more influence carried by emotional appeals and images than by rational arguments; and the general tendency to fill leisure time with entertainment rather than study. While there are several ideas to improve education, some good, currently being debated, there is a need for a more careful analysis of the challenge of education in our culture, with some understanding of a broader perspective as to why we are where we are today. It is crucially important for the prospect of passing on the riches of a liberal arts education that our culture has become dominated by entertainment. The emergence of an “entertainment culture” needs to be addressed before substantial progress can be made. For the purposes of this article we can understand the entertainment culture as the widespread and fast-paced electronic media: television, movies, video games, aspects of the Internet, cell phones, and types of music. Secondly, and related in a somewhat ironic way, our culture has also been damaged by what some have referred to as workaholism, an inordinate drive to define oneself by commitment to work. I hope to show how both indulgence in entertainment and the “busy-ness” of overworking, on a personal level, stem from a lack of temperance and fortitude, virtues essential to acquiring a liberal education. Likewise, an important part of the solution is to promote a renewed culture of reading, conversation, and attention to others as persons in our families. For this to happen we must embark on a new ascetical path so as to relearn how to cultivate silence.

We live in an entertainment culture

Entertainment is certainly not new to contemporary times. A strong argument can be made that it is simply part of our human condition that people seek pleasure. Aristotle was a bit more sophisticated on this point, noting that all men really seek happiness, which, he admitted, most people confuse with pleasure. For Aristotle, true happiness is found through virtuous action and friendship, and is that which really fulfills a person’s nature. His contempt for the tendency among most people to seek pleasure is powerfully captured in a particularly poignant quote from the *Nicomachean Ethics*: “The utter servility of the masses comes out in their preference for a bovine existence.” [i] Note that Aristotle identifies those who indulge their passions for the sake of pleasure as living a cow-like life (in the sense

that a cow is satisfied when fed, with no higher ambition) that is also analogous to the life of a slave. Aristotle correctly realizes that indulgence is a form of slavery; it is becoming a slave to one's passions. Pleasure seeking, which is closely related to indulgence in entertainment, is clearly not new. Likewise, we need only think of the coliseum in ancient Rome and the masses of people who would flock to the games—gory entertainment in raw form—to see that we are dealing with a perennial human problem.

In our times, entertainments of choice, especially for school-age children and young adults, are primarily electronic: video games, television, movies, music, and certain aspects of the Internet—what we are calling the entertainment culture. And while the rowdy citizens of ancient Rome left the Coliseum to return to their often drab existence, these modern forms of entertainment follow us right into the heart of our homes and indeed, with the proliferation of sophisticated mobile communication devices, almost wherever we go. That the intensity and prevalence of these modern forms of entertainment pose challenges for education is well known by those in the profession. Consider the following observations by an Advanced Placement (AP) English teacher from the suburban Washington, DC, area written in an article for the *Washington Post*:

I've known for a long time that a lot of the boys in my English classes are more interested in connecting with their Xboxes in the evening than with the next three chapters of Toni Morrison's *Song of Solomon*. But ever since I observed their mounting hysteria over last month's "premiere" of Halo 2, the new combat game from Microsoft, I've been trying to find out what's behind the lure of video games. As the boys I teach have endeavored to enlighten me, I haven't known whether to laugh, cry, or go find a new job. What they told me has me wondering how what I teach can possibly compete with the fast-paced razzle-dazzle of this ever-evolving entertainment form and worrying about the younger guys who spend so much time divorced from reality and the life of the mind as they zap away the hours before their video screens...

I'm not the only one to see it happening. T.C. girls have told me that at parties they are often totally ignored as the guys gather around TV screens, entranced by one video game or another. "Girls sit around watching the guys play until they get fed up and drive off looking for something else to do," says junior Sarah Kell, for whom the games range from "stupid and boring" to "disgusting." (Most girls tell me they find the games silly.) "We try to tell them they're wasting their time, but they just keep going. Some guys stay up playing until 3 in the morning on school nights, and then try to do their homework..."

But my immediate concern is how to get books back on the playing field. I became an English teacher because I love literature... we enter an imaginative world slowly, through the written word... whatever vicarious experience a novel or even a movie can offer, "gamers" say it can't approach a video game's intensity of experience...

Old Dominion University freshman Nick Pratt said that as soon as Halo 2 came out, some guys skipped classes for three straight days to play the game in the dorms. Duke freshman Sarah Ball told me she can walk down the hall of a male-only floor in her dorm and hear video games going in every room... [ii]

Young teachers at the all-boys school at which I teach assure me that this is what actually happens on a wide scale: many male college students are choosing video games over not only their studies, but even over interest in young women.

Toward a deeper analysis: entertainment as a waste of time vs. entertainment as a dissipation of one's

interior faculties and humanity

It is interesting to think a bit more deeply about the educational problems posed by living in an entertainment culture. It is not just a problem because of the amount of time wasted, time spent in front of various screens. The [Kaiser Family Foundation](#) estimates this to average over 7 hours per day. Certainly this is a great deal of time, some of which could be more profitably spent studying or reading. But I think that the crux of the problem is much deeper. Roald Dahl hints at this in his novel *Charlie and the Chocolate Factory*. The basics of the story are familiar: a poor and very unspoiled child, Charlie, wins a once-in-a-lifetime chance to see the inner workings of the famous chocolate factory with a group of other children that, one by one, get into trouble with their various vices. The last to go is Mike Teavee who is undone by his fascination with television. The Oompa-Loompas give Roald Dahl's commentary on the situation:

The most important thing we've learned,
So far as children are concerned,
Is never, NEVER, NEVER let
Them near your television set—
Or better still, just don't install
The idiotic thing at all.
In almost every house we've been,
We've watched them gaping at the screen.
They loll and slop and lounge about,
And stare until their eyes pop out.
(Last week in someone's place we saw
A dozen eyeballs on the floor.)
They sit and stare and stare and sit
Until they're hypnotized by it,
Until they're absolutely drunk
With all that shocking ghastly junk.
Oh yes, we know it keeps them still,
They don't climb out the window sill,
They never fight or kick or punch,
They leave you free to cook the lunch
And wash the dishes in the sink—
But did you ever stop to think,
To wonder just exactly what
This does to your beloved tot?
IT ROTTS THE SENSES IN THE HEAD!
IT KILLS IMAGINATION DEAD!
IT CLOGS AND CLUTTERS UP THE MIND!
IT MAKES A CHILD SO DULL AND BLIND
HE CAN NO LONGER UNDERSTAND
A FANTASY, A FAIRYLAND!
HIS BRAIN BECOMES AS SOFT AS CHEESE!
HIS POWERS OF THINKING RUST AND FREEZE!
HE CANNOT THINK – HE ONLY SEES!
“All right!” you'll cry. “All right!” you'll say,
“But if we take the set away,
What shall we do to entertain

Our darling children? Please explain!"
We'll answer this by asking you,
"What used the darling ones to do?
How used they keep themselves contented
Before this monster was invented?"
Have you forgotten? Don't you know?
We'll say it very loud and slow:
THEY... USED... TO... READ! They'd READ and READ,
AND READ and READ, and then proceed
To READ some more... [iii]

Dahl recognizes that there is a deeper problem. Television and, we can add, the rest of the entertainment culture, can be quite destructive, rotting interior senses, destroying imagination, cluttering the mind, and dulling and weakening the intellect.

To understand this better it is helpful to reflect on the activity referred to as "studying." Studying is a type of human work aimed at gaining knowledge and understanding that requires disciplined use of the mind over a period of time. That studying necessarily requires a sustained effort is clear when we consider some examples of studying: engaging a great work of literature, learning about a complex biological system (such as respiration), or understanding the intricacies of a certain historical period. The fortitude to maintain one's concentration and focus is necessary, not only to avoid quitting, on the one hand, by either simply giving up or by wasting time through daydreaming, but also to keep on task, to resist giving in to curiosity so as not to be led away from the task at hand on a tangent. A classical understanding of this process highlights the active role of the person's interior faculties in studying: the necessity of one's imagination producing the images that the intellect uses to understand and analyze. The images generated by one's imagination and presented to the intellect have been called, in certain philosophical schools, the phantasm. The intellect with its rational powers acts upon the *phantasm*. Reading requires that the mind work to transform the written word to something that one can ponder. In study and reading it is the interior intellectual faculties (imagination and intellect) that are necessarily operating in an independent, self-directed, and active manner.

The entire mental state changes when someone receives images from a screen. Dahl's line, "HE CANNOT THINK – HE ONLY SEES," is quite insightful. Rather than consciously directing its attention and producing the images necessary for thought by itself, the mind is semi-hypnotized—it lazily absorbs and follows the images that are presented to it on the screen. Whereas normally the imagination must work to produce the phantasm, an audio-visual image, for the most part, supplies the phantasm to the person absorbed in watching it. Even if the mind does filter and modify the film images in some way this is slight and done in a passive matter rather than actively by the person. It is a common experience for someone's own image of a literary character or scene in a novel to be changed once a movie version has been viewed. I know Tolkien fans who have expressed frustration at how the recent *Lord of the Rings* movies have supplanted their original interior visions of the characters and landscape.

Though the imagination can still function to some extent when watching a video, especially if the video is displaying material at a slower, more human pace, the very nature of the medium requires some surrender of control over the thought process. This surrender becomes more pronounced when the video images are intense, fast-paced, and engineered with sounds so as to engage the emotions as well. In such cases, though the reasoning powers of the intellect are not directly violated (it is not as if the screen image forces the intellect to reason in a certain way), the intellect is manipulated by not being

allowed the time to reflect in accord with its normal pace of operating. The attention span shrinks. There is no time to ponder the images. As Dahl notes, one result is an artificial calm; the interior senses are sedated, even deadened. Dahl is not exaggerating when he says television “ROTS THE SENSES IN THE HEAD.”

Perhaps some clarification is in order here. First, based on what we have said thus far, it is interesting to note that the more fast-paced, engaging, loud, and emotionally or violently charged a film is, the less active the thought process of the one watching it necessarily becomes. If a film powerfully engages the senses and emotions through its rapidly changing scenes, carefully engineered sound track, and fast-paced action or emotive plot, then the effect on the person watching it is to make his thought process very passive. The person watching such a film is absorbed in it, swept away, giving over the control of his or her imagination and surrendering his mind to the phantasm of images and emotions presented to it. He may feel strong emotions which give him the impression of being excited, but the more his passions are aroused by the audio-visual images he absorbs, the less his intellect functions in a self-directed manner. On the other hand, a film that is slow-paced, full of long scenes with significant and sophisticated dialogue, is received in a manner much closer to that of reading a book, a manner much more in accord with a normal human mode of operation. The mind has time to consider the information presented to it and, though the images do certainly have an impact on the imagination, the person is left freer to ponder what he or she is receiving. Many such films can be of benefit to the humanity of those who watch and reflect on them.

At the extreme other end of the spectrum are video games and, even further, pornography. In the virtual world of video games the person not only is engrossed and swept away by the images and sounds, but he even becomes an actor of sorts in this virtual world. The person viewing pornography acts even further against his intellect. In viewing pornography the person is choosing to embrace a fantasy, a falsehood. The pornography is a lie: no one is really there. In reality, persons are not mere objects of pleasure but have a unique dignity that cannot be separated from their relationships to others. Implicit in each false pornographic image is the lie that this person is not really fully human with all the relationships this entails: with a father and mother who cared for her as a child, with siblings, friends, grandparents; that she was once a helpless baby and will perhaps one day be helpless near the end of her life. Just as a film can produce a strong emotive response while manipulating the intellect so that it is passive, so in pornography the arousal of the passions happens in contradistinction to the proper functioning, indeed the human functioning, of the intellect. In such cases the person chooses against his intellect—chooses the lie—to give free reign to his passions. In these instances the dehumanization is expressed through the excited passions in a manner detached from right reason. If Aristotle is able to note the slavery associated with becoming a servant of one's passions, of living the life of a cow, how much more so the case if the passions, once aroused, turn back on the person to engulf his personality ever more completely in their grasp. Pornography does this much more powerfully than a typical video game does, but the active engagement in the virtual world created by a video game is not unrelated from a phenomenological perspective.

Regardless of whether we are considering the audio-visual images of television and film or video games Dahl has an additional point to make: the person who indulges in the entertainment culture not only suffers some destruction of his humanity, some loss of his personal integrity, but his relationship with reality also suffers. Entertainment overload dulls the proper sense of intellectual wonder that should exist whenever anyone devotes his efforts to learning about reality. In Dahl's words, “IT MAKES A CHILD SO DULL AND BLIND, HE CAN NO LONGER UNDERSTAND A FANTASY, A FAIRYLAND.” Contact with reality has been replaced with captivation by “virtual reality.” And in the process, perceptions of the real world change. Modern man looks at reality and is too often bored; what should invoke wonder

is seen as dull. The beauty of nature, a tree or a sunset, is a subtle beauty, a beauty that must be seen with a contemplative eye to be appreciated. There is a human pace to friendship, to appreciating another person for who he or she is and can be. Someone who lives at the pace of a video game, who is engulfed in “entertainment-driven virtual reality,” has a much more difficult time developing strong friendships.

Since my focus is on the entertainment culture and the intellectual life, I would like to conclude this section by pointing out an interesting paradox. Traditionally curiosity has been classified as an intellectual vice, because the curious person is one who cannot focus long enough on something to build up knowledge that approaches mastery. The curious person is too easily distracted. In the modern context, however, the overly entertained person is so distracted that he is no longer “curious” about reality in a healthy sense connoted by the word in contemporary parlance, as in taking a healthy interest in reality. In this sense some curiosity is a step in the right direction for many and it can lead, with proper training, to the healthy sense of wonder that is necessary for contemplation. For this reason curiosity is spoken about today as being a type of intellectual virtue, which it is to the extent that the curious person is not so intellectually and spiritually dull as to be uninterested in reality. In other words, if traditionally curiosity has been the chief obstacle to becoming truly studious, in contemporary times a dull boredom in the face of reality has overtaken this dubious honor, so much so that the chief vice of past ages seems almost refreshing by comparison.

Indulging in entertainment, indulging in work?

The second cultural challenge that I would like to address is the problem that many have referred to as “workaholism.” Admittedly, at first glance it is rather odd that a culture that struggles with the problem of overindulging in entertainment would also have a problem with an inordinate attachment to work. Nonetheless it is clear that this is part of the struggle of our culture: many professionals are pressured to work over sixty hours per week to succeed in their respective fields. I see this tendency in some students who try to take the most AP courses they can fit in to their schedules and who also become involved in many extracurricular activities. In some cases their lives are literally planned down to the last detail, so that they rush from one activity to another with study and homework filling up all of their free time. Organized sports, perhaps even over-organized sports, have replaced the neighborhood pickup ball game. Gone are the days of the sandlot and children taking the initiative in their play. The role of a young child in an adult-organized sports league is analogous to a low-level employee in a large corporation: someone who shows up simply to do their task and take directions from those in charge. This may be an exaggeration, but we do have to admit that the children who had to organize and manage the pickup ball game at the sandlot were learning a great deal about how to get along with others and even leadership.

In any case, is it really surprising that someone who grows up indulging in entertainment can end up as an adult who indulges in work, losing himself in busy-ness? This outcome is generally considered a “success” by many high achieving adults today, especially since the most common alternative is that one never leaves the stage of the perpetually indulgent adolescent, shifting from one job to another with free time spent playing video games and such. In the former case, the person has simply shifted his indulgence from entertainment to work and entertainment (let’s face it, intense entertainment is likely to still be here); in the latter, there is little shift at all. Workaholism is every bit as much of a lack of temperance as indulging in entertainment is; and it leads to the same dullness and boredom. The ironic aspect of workaholism looked at this way is that it’s not really hard work at all; rather, it is simply another form of laziness. In 1908, G. K. Chesterton recognized this problem and described it in a wonderful book of his called *Orthodoxy*. He writes:

It is customary to complain of the bustle and strenuousness of our epoch. But in truth the chief mark of our epoch is a profound laziness and fatigue; and the fact is that the real laziness is the cause of the apparent bustle. Take one quite external case; the streets are noisy with taxicabs and motorcars; but this is not due to human activity but to human repose. There would be less bustle if there were more activity... Our world would be more silent if it were more strenuous. [iv]

So much of workaholicism is the result of unnecessary bustle. One clear example is the way email is sometimes used in the workplace: in large organizations people are often flooded with meaningless email information, or an online “conversation” is taking place to determine the next course of action based on the most current data. If people approached work with more of the strenuous silence of which Chesterton speaks and which is really a hallmark of a solid liberal education, then real work would get done and bustle would decrease. Once I found myself in the position of having to discipline a student of mine for some minor infraction. I very much like this young man but being around him for any length of time certainly gives the impression that there is a great lack of inner silence or strength. I instructed him to simply go into a quiet room for ten minutes and that would be it. He came out looking for me after about three minutes and said, “Mr. Moynihan, I couldn’t do it. You don’t understand, sir! The quiet was starting to really get to me...” I have noticed that some students who approach their studies with diligence, and even with a certain amount of busy effort, often are held back from doing great work by the laziness of too much activity and not enough contemplation. As a math teacher, I can tell you that diligence and hard work will only take one part of the way to success; it is also necessary for there to be a certain inner calm and order that makes a student appreciate the principles at work with a healthy spirit of wonder. This is the type of student who will be able to make the necessary connections.

Toward a solution: A call for a new asceticism and the recovery of silence

Part of the solution becomes apparent from the diagnosis of the problem: if the most significant reason behind the current crisis in education and our overly busy, less-productive marriage to our work is over stimulation from indulgence in entertainment, then it is clear that the entertainment (or most of it) must go. Though this renunciation will be difficult, I do think that very little progress in addressing the current crisis in education can occur until this generation becomes “unplugged.” What is needed is a broad cultural awakening to the need for a new asceticism which makes room for the cultivation of silence.

It is essential for a vibrant intellectual life that a person focuses on a text in silence. This silence is not just the absence of noise. It is the strenuous silence of one who has the studious fortitude to engage a difficult text, to memorize what needs to be memorized, to analyze, and finally to contemplate. The key here is building up virtue, understood particularly as the fortitude to persevere in the difficult task of study and the temperance to ponder matters throughout the day. This will require ascetical struggle: the effort to forgo distracting entertainment to preserve the silence necessary to really learn. In this context, real educational reform must begin in the home. Parents really are the primary educators of their children. Any attempt to ignore this by exclusively focusing on schools is doomed to fail. How can it be possible for any school, even the best possible school, to accomplish the noble goal of educating students in approximately six hours per day for roughly half of the calendar days of the year if these same students live in family environments dominated by electronic entertainment?

Parents first of all need to be convinced that they have the authority and the responsibility to appropriately govern their homes and guide their children. This governance must actively extend to all electronic media and entertainment. Parents would be exercising their authority well by only allowing

the family to view films or television programs selected ahead of time. It would be reasonable to watch these select programs only when they fit well into the family schedule and perhaps only as frequently as once per week or a few times per month. It would also be reasonable to not allow any video games in the home.

Appropriate governance, however, extends far beyond what is forbidden. Parents must control the schedule for the family. Perhaps at dinner a discussion can be held about the following day. At this time the children can be allowed to give input but the final schedule for the day will be the decision of the parents. Most days will include scheduled time for reading and study as well as chore time. This schedule should be posted in a public place, perhaps on the refrigerator. Many good things will happen once the schedule of a family comes under rational parental control: meals together, family trips and excursions, division of the work to be done, quiet time devoted to reading and study, some free time bound by a definite beginning and a definite ending, sports and activities (though these have to be limited), and time for friends and relatives. It has been our experience that as long as the children are given an appropriate amount of input, planning the day helps them to be happier; in general, they follow the family plan joyfully. This works best if husband and wife periodically meet privately to discuss upcoming events, decisions that need to be made, and the development and needs of each member of the family.

Likewise, real educational reform will include training teachers to successfully coach their students in acquiring the intellectual virtues. As in athletics, an intellectual coach will know how to foster periods of intense study, periods where the student enters into the difficult but rewarding task of grappling with challenging texts or ideas. There is a wonderful philosophical maxim that notes that the spirit is where it acts. True education must include an element of focusing one's mental faculties on the material, countering the dissipation of scattered attention.

A good teacher, someone who knows that part of his role must be as an academic coach dedicated to forming virtues in his students, especially fortitude and temperance, also knows that the full sense of a liberal arts education does not stop here. More than just a training of the mind, it is a liberating of the mind. Indeed, the word "liberal" comes from the Latin root word liber meaning "free." The person is freed not only from being governed by his passions and affections but, over time, even from the opinions that he has picked up from the culture in which he lives. He can enter into a great human dialogue on matters of fundamental importance: the meaning of our common humanity, the possibility of genuine self-sacrificing love, human suffering and death, in short, all the primordial human experiences that have inspired the greatest works of art, literature, and philosophy throughout the centuries. There is a specific content, part of a great human dialogue, which forms the material of a complete liberal arts education.

[i] Aristotle, *Nicomachean Ethics*, trans. J.A.K. Thomson (New York: Penguin, 1976), 68.

[ii] Patrick Welsh, "It's no contest: Boys will be men and they'll still choose video games," *Washington Post*, 5 December 2004.

[iii] Roald Dahl, *Charlie and the Chocolate Factory* (New York: Penguin, 2008), 171-73.

[iv] G.K. Chesterton, *Orthodoxy* (New York: Doubleday, 1990), 124.

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The Gutenberg Galaxy: How McLuhan Opened a New Path in the Digital Age to the Socratic Ideal of the Examined Life

FR. FEDERICO PONZONI F.S.C.B.

Introduction

Our lives are more and more determined by technologies, in particular by technologies that allow us to communicate with one another more cheaply, more rapidly, and across greater distances. In such circumstances posing the question about how to live in a technological world is unavoidable. If we are interested in finding an answer to the question posed above, Marshall McLuhan's *The Gutenberg Galaxy* is a book that has still much to say to us. So what does this book have to say fifty years after its publication to a global society that has undergone such radical changes?

The book contains at least two intuitions that have the potential to change the way we relate to one aspect of our lives that has become more and more important: our relationship with technology and specifically with communication technology. I will sketch out a path that has the potential to avoid the two extremes of technological enthusiasm and total Luddite rejection of technology.

One of the most significant changes that has taken place in society since McLuhan is the so called *digital revolution* in which information converted in binary code becomes more important even than physical reality. Summarizing Nicholas Negroponte's book on the digital age, we can affirm that "bits are more to us than atoms." [i] Many, such as Crawford, Turkle, and Carr argue [ii] that the digital age is not the paradise it was promised to be. Technology makes us feel more alone (Turkle), more distracted (Crawford), and sometimes incapable of real human connection. Indeed, some claim that the internet is making us stupid as well (Carr). Authors such as Carr, Turkle, Crawford, Lynch, Lopez, and others expose the fact that the much-anticipated digital age has importantly undermined our humanity.

I shall claim in this article that two of McLuhan's intuitions might open a path to counteract the dehumanizing aspects of our "smartphone shaped" existences. This path may lead us back to Socrates' ideal of an examined life.

The Main Argument of *The Gutenberg Galaxy*

The Gutenberg Galaxy is a book about the effects of the introduction of a movable type press on practically any- and everything conceivable, from politics to economy, from science to art, from society as a whole to the individual's perception of time and space. McLuhan's book is based on a core argument: the human being's five senses are organized as a whole into a *sensorium*. The internal organization of the *sensorium* functions according to laws that prioritize one sense or group of senses over the others. These laws, according to McLuhan:

a) change in relation to a given communication technology;

- b) govern the way in which the individual perceives and appraises the world;
- c) and therefore give shape to the whole cultural landscape of a given culture.

All this means that if you communicate only orally (i.e., if you live in a culture that has not discovered writing), your *sensorium* will be organized by laws that give priority to hearing and touch over that of sight. This, in turn, leads the individual to perceive and appraise the world in a way that is not only influenced but completely shaped by this priority. This means that persons from cultures where the oral way of communication organizes the *sensorium* by hearing and touch live in a world that McLuhan repeatedly describes as “magical.”

It should be noted that by “magical” McLuhan means inhabited by obscure forces that act unpredictably. Examples of oral magic can be found in many different cultures that range from the daily life of the Azande tribe to the Homeric hero. Evans-Pritchard describes in colorful detail how the Azande attribute every “unfortunate event” in their life to witchcraft [iii]: “If blight seizes the ground-nut crop, it is witchcraft; if the bush is vainly scoured for game; if women laboriously bale water out of a pool and are rewarded by but a few fish it is witchcraft.” A Zande boy hurts himself knocking his foot on a stump. He was careless—argued the anthropologist. The stump wasn’t placed there by witchcraft. But it was witchcraft that made him careless—argued the Zande boy.[iv]

Homeric characters lived lives dominated by gods. Their action was unpredictable, capricious, and often malevolent. Moeller, for instance, holds the view that Homeric heroes cannot be fully held morally responsible for their actions and reactions because the gods somehow take hold of them. The Homeric hero perceives the gods as forces driving him irresistibly, like Heracles who slaughters his own sons after being induced by Pallas to believe they were his enemies, or like Helen irresistibly drawn to Paris by Aphrodite.

What it is that causes a particular hero to take a certain course of action are mysterious personal forces acting at the same time as the hero’s actions.[v] Both in the example of the Azande boy and the examples of the Homeric heroes, an unseen malevolent force acting at the same time as the event or action is seen as the true cause of it. This is due to the fact—McLuhan seems to suggest—that the auditory field is characterized by simultaneity: different sounds are all perceived at the same time. Sight, by contrast, is successive: things are seen one at a time. Magic can only happen in a simultaneous field, one that doesn’t allow the perception of cause as prior to effect. A lineal perception of time—McLuhan argues—allows seeing causal, mechanical, and logical connections between events. Priority given to sight thus destroys the very core of the magic conception of the world. Heracles slaughtered his offspring due to some temporary psychiatric condition that you can find in the DSM-V, such as a brief psychotic disorder associated with hallucination and violent behavior, and the Zande boy was really careless, in a culture dominated by the visual field.

In other words, the communication technology a given culture uses determines how individuals belonging to that culture perceive the world. The way in which the individual perceives the world in turn determines the whole cultural landscape in which the individual lives in terms of values, social organization, beliefs, practices, etc.

Western Culture and Some Critical Remarks on *The Gutenberg Galaxy*

In *The Gutenberg Galaxy* McLuhan tries to apply his theory regarding the organization of the sensorium as shaper of cultures to the whole of Western civilization after the introduction of movable type press in the fifteenth century. What the Canadian thinker tries to accomplish is, in fact, to give an account of

how Gutenberg's invention has molded Western culture in any and every aspect. *The Gutenberg Galaxy* takes the shape of a collection of seemingly unrelated essays, some describing a facet of Western culture before Gutenberg and some after.

McLuhan is not the only one suggesting that technology tends to shape decisively both culture and society. Harold Innis in his *Empire and Communication* [vi] suggests that it is impossible to think of a human society organized as an empire without a communication technology that allows messages to be interchanged across long distances. Walter Ong in his *Orality and Literacy* [vii] describes the psychology of the oral man. He also depicts how the psychological structure of the oral man changes when writing is introduced.

Seen from the point of view of established disciplines, the book is hard to classify. Is it a history book that investigates a past event, namely the introduction of a movable type press? Is it a psychology book that attempts to unveil the effect of a new technology on the individual's perception of space and time? Is it a sociology book that tries to shed light on how social change results as the product of the introduction of a new technology? Is the book an examination of how literature reflects social change? If you read the book as a specialist in one of these disciplines and you believe in rigorous boundaries between different specialties, it will certainly disappoint you for its lack of rigor. Gutenberg's *Galaxy* is a far away galaxy in the sense that it is far from being a piece of traditional scholarship.

McLuhan's book, if you're a scientific-minded scholar, is disappointing also in that one of its main theses was proven false. He hypothesized that the culture in which he lived, heavily determined by television, had noteworthy similarities with oral cultures, where everything is temporally simultaneous. From that he deduced that cultures in which patterns of orality still survived would have a comparative advantage with respect to cultures determined by print.

If television and other electronic media are rearranging the *sensorium* of the people of the whole planet in such a way that the whole culture of the globe becomes basically oral, it is obvious to predict that those ethnic groups who practice orality and don't have to learn it anew like the West had to, will attain political and economic supremacy. This didn't happen. We haven't seen the Azande or any other oral culture dominate the world through television.

McLuhan's Lasting Intuitions

That said, McLuhan's insights have the potential to be the basis of a more humane life in the digital age. I will focus on two. I'm going to call the first of the two the principle of transparency, and the second the principle of inseparability.

The Principle of Transparency

According to the principle of transparency, an age in which communication technology is changing is open to a new self-understanding in a way that other ages are not. McLuhan, although too prone to express his thoughts in an oracular and fragmented (annoying) way, nonetheless knows that if he wants to be taken seriously he has to answer a very simple but essential question: "Why now?" In other words, why only now in history do the effects of communication technology on culture as a whole become visible? Why didn't, for example, Plato or Descartes or Kant notice that communication technology, by means of a restructuring of the *sensorium*, affects the whole cultural life of mankind?

McLuhan answers with surprising simplicity to the above question: "Perhaps the reason for the omission [of noticing the effects of communication technology on culture as a whole] is simply that the

job could only be done when two conflicting forms of written and oral experience were once again co-existent as they are today.”[viii] Maybe McLuhan was a genius, but the historical context in which he lived was unique in giving him the possibility to see what no one before could. Television and radio bring back into the cultural life of the West forms of life that are typical of oral and tactile societies. The very fact that two forms of experience, the written and the oral, are conflicting and co-exist, opens the possibility of a new kind of cultural self-awareness. A culture, i.e., a historical context, in which conflicting communication technologies co-exist becomes aware of the effects of those same technologies on itself, and therefore is *transparent* to itself.

To summarize, according to the principle of transparency we live in an historical context that is transparent to itself, that is to say, self-aware of the effects of technology on itself.

The Principle of Inseparability

The principle of inseparability refers to the fact that according to McLuhan we have to reject something very deeply rooted in our comprehension of communication: the possibility of separating form and content. According to McLuhan, the “medium is the message.” One possible way of understanding McLuhan’s line—which I find the most convincing—is the following: a given communication technology, a medium in McLuhan’s terminology, has effects on society as a whole. These effects are produced almost entirely by the introduction of a new communication technology, regardless of what is actually communicated through it. For instance, books change our way of perceiving space not because something is written in them such that we have to perceive space in a new way, but because reading in a sequential line changes the way we use our eyes. This change brings with itself a new understanding of space itself.

From the point of view of the change brought by reading books in the understanding of space, *what* is written in a book, its content, is altogether indifferent. What matters is the fact that books are read.

Another example of the inseparability principle can be drawn from Harold Innis. Empires need writing. For an empire to function as empire, it requires that relatively dense messages with a great amount of instruction, orders, lists and so on reach long distances in relatively short spans of time. Power cannot be exerted over long distances without writing. It is not important whether the empire is good or bad, whether the orders given through writing are just or unjust. For an empire to exist it does not matter what is communicated through writing. It is important that writing exists as communication technology. These two examples may not explain fully McLuhan’s line. To better grasp the point, it might be helpful to point out the alternative understanding of communication technology: the *instrumental conception*. According to that conception, a technology is a mere instrument. Content is the leading force in this conception. If the content of the communication technology is good, human life will flourish. If the content is bad, then human life will become corrupt. If we transmit good television, we will educate the masses. If we transmit pornography, we will pervert them. In other words, communication technology is a neutral vessel. This is a conception according to which it is possible to separate the content and form of a given message. But this ignores the very thesis that McLuhan and others have so thoroughly articulated: that a given communication technology has effects on culture in itself, regardless of what is communicated through it.

It should be noted that the inseparability principle comes with a somewhat counter intuitive corollary that applies to our daily lives: communication technology cannot be used innocently. The more we use technology, the more we are somehow also used by it. As an example, we can think of how our smartphones have extended our work time. We bought a smartphone as a useful tool that should make our life easier (with a smartphone and Google Maps you won’t get lost anymore), but we may find

ourselves answering emails from our boss at odd hours (which leads to a reduction of the quality of time we spend with our families).

The Examined Technological Life

It is obvious that in the Canadian thinker's book you won't find any easy answers. Our epoch is so strongly marked by a continuous revolution in the way new technologies shape our daily lives and our way of communicating. So why read it now?

According to McLuhan's principle of transparency, there are cultures or historical circumstances that are particularly aware of the effects of communication technology on themselves. Only cultures in which different communication technologies compete are granted such an awareness. This is particularly true of our present time. So, if McLuhan is right, then today we have the possibility of being even more aware of the effects of technology on our lives than in McLuhan's time, precisely because today we have even more competing technologies.

If the principle of transparency leads to a general awareness of the effects of technology on society as a whole, then the principle of inseparability grants us the possibility of being aware of the effect of any single new technology. The principle of inseparability becomes then a conceptual tool that allows us to analyze at what cost we become a user of certain technology. What kind of friendship is a Facebook friendship? What kind of discussion is a Twitter discussion? What does it mean to have Netflix in our homes? Might it result in the disruption of family life?

The two great intuitions of McLuhan's invite us to ask broad and deep questions about our culture as a whole and about our private lives as influenced by media. Both of them put us on critical alert: technology comes with a price.

This way it is possible to envision a form of life in the digital age in which technology is neither condemned in an a priori fashion nor a-critically embraced. I speak about a form of life in which the question regarding where technology is leading society and the question regarding the effects of any single new technology is consciously and deliberately cultivated.

Thus *The Gutenberg Galaxy* is an introduction to nothing less than a form of life. A form of life that doesn't take for granted any easy answer to the question of technology and thus rejects both Luddism and technological enthusiasm. In its wake I envision a life of relentless questioning. In short, it fosters a form of life that revives in the digital age the Socratic ideal of the "examined life."

[i] Cf. N. Negroponte, *Being Digital* (New York: Knopf Doubleday Publishing Group, 2015), 11–13.

[ii] S. Turkle, *Alone Together* (New York: Basic Books, 2011); M. B. Crawford, *The World Beyond Your Head: On Becoming an Individual in an Age of Distraction* (New York: Farrar, Straus and Giroux, 2015); N. G. Carr, *The Shallows: What the Internet Is Doing to Our Brains* (New York: W.W. Norton, 2010).

[iii] E. E. Evans-Pritchard, *Witchcraft, Oracles and Magic among the Azande* (Oxford: Clarendon Press, 1937), 63.

[iv] *Ibid.*, 66.

[v] C. Moeller, *Sabiduría Griega y Paradoja Cristiana* (Madrid: Encuentro, 2008), 31–51.

[vi] H. A. Innis, *Empire and Communications*, Critical Media Studies: Institutions, Politics, and Culture (Toronto: Rowman & Littlefield, 2007; first ed.: Oxford, 1950).

[vii] W. J. Ong, *Orality and Literacy: The Technologizing of the Word*, New Accents (New York: Routledge, 2002; first ed.: 1982).

[viii] M. McLuhan, *The Gutenberg Galaxy: The Making of Typographic Man* (Toronto: University of Toronto Press, 1962), 1.

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The Discovery of Freedom: Incarnate Education and the Work of the Child

ERIK VAN VERSEDAAL

Advocates for the use of computer technology in the classroom tout all manner of benefits that tablets promise for the education of young children—they are stimulating, interactive, and effective. The increasingly widespread use of such novel technologies provokes us to ask: what place do tools have in mediating education? What is the end of education, and what sort of objects can rightly serve as means towards that end? If we keep the scope of this question restricted to early childhood education, we find, in addition to the tablet, that there are other models for including a mediating third in the relationship between teacher and student. As one serious alternative to instructional technologies, we can take the example of the so-called “materials” employed in Montessori education.

The Montessori *Casa dei Bambini*, also called the primary classroom, serves children aged 3–6. The casa employs a host of simple but articulate objects, or materials, that are meticulously designed to support the child’s learning. Maria Montessori spoke of this classroom as a “prepared environment,” in which materials are arranged according to overlapping spheres of knowledge. In this prepared environment, children are individually taught to work with materials in a graduated order. Once he has been shown the form according to which he should interact with a given material, the child is permitted to select it for his work. Throughout the “work period,” children in the *casa* choose materials to which they have been introduced from the shelves in the prepared environment. The whole of the Montessori method revolves around the activity of the child’s slow work with one material at a time.

Invoking this method therefore intensifies our initial question: in what sense can artificial things belong to the act of genuine learning? In what follows, we argue that Montessori materials and tablets offer radically different responses to this problem. In comparing the two here, we prescind from any metric that could project or tabulate the respective outcomes of these approaches to teaching, since surveys and calculation can never be an accurate test of *goodness*. Instead, we proceed by first contemplating the meaning that each of these tools manifests, and then by asking which of these meanings is more adequate to the education of a small child (or indeed of any human person). After reflecting on the role of the material in the primary classroom (1), we distinguish the tablet from the material in terms of the relationship between appearance and depth that each exhibits (2). What comes to light in the comparison between Montessori materials and the tablet is that these do not merely represent two different kinds of objects, but two different ways of mediating (3). In an effort to specify what we see as the difference between these orders, we will speak here of incarnate mediation (instantiated in Montessori materials) and virtual mediation (typified by the tablet), each of which embeds its own vision of education. Moreover, we maintain that each of these “tools” of learning realizes a different understanding of the child’s fulfillment (4) and a different sense of relation to the world and its Creator (5). Throughout we mount a case against virtual education, doing so in the hopes of contributing to discussions both on the nature of education and, more broadly, on the ontological significance of ‘things.’[i]

1. Incarnation and Incorporation

Before addressing these two ways of being means—the incarnate and the virtual—it will be instructive to first consider the *telos* of education as Montessori understands it. Characteristic of Montessori's educational theory is her insistence that teaching should be focused on the child's attainment of independence. She sees it as the imperative of the educator to remove all obstacles that inhibit the development of the child's spontaneous self-direction. We have to admit that there seems to be a perilous ambiguity in this idea of independence: isn't it specifically the grandeur of the child to rejoice in depending on the love and care of others?[ii] Doesn't the child reveal to us in a privileged way that freedom does not first consist in sovereign self-reliance?

As Montessori means the term, independence does not refer to, for instance, the mere fortification of one's will against infringement by other, competing wills. Rather, she prefers to think of independence as unimpeded, well-cultivated growth. She conceives of the child's growth as the unfolding of its nature, and thus treats nature in an Aristotelian fashion as the immanent and pervasive principle of a being's development and fulfillment.[iii] Growth here would be understood as the epiphany of form, the manifestation of what a given organism is, the materially-expressed emergence of its deepest identity. In Montessori's view, it is the first responsibility of parents and caretakers to both safeguard and *promote* the innate impulse of the child towards such self-burgeoning. In human persons, she affirms, the vital growth of the body accompanies and supports the flourishing of spirit in consciousness and freedom. Her method thus begins from contemplation of the ordered but pliant way in which embodied persons naturally aspire towards corporeal-spiritual perfection. As a sentient and intelligent agent, the child becomes himself always through living involvement with other persons and the physical environment in which he has his place. The formation of his identity is inseparable from his augmented capacity for belonging to a world. This principle stands behind Montessori's conception of the materials employed in the prepared environment. These are instruments, so to speak, for fostering and awakening potentialities immanent in the child's given constitution. It is therefore the nature of the child that is the standard for the design and relative ordering of these materials. However, this also means that the child's rise into freedom is most basically, and abidingly, an act of obedience to an order that it has been given to embody. The liberties of the child in the Montessori classroom are always subordinate to this primary, encompassing obedience to nature. This perspective entails the affirmation that the child is originally good, so that education's whole purpose is to reverentially enable the child's goodness to prosper on the basis of his own substantial resources—*i.e.*, to grow.

Since physiological development is integral to the maturation of selfhood, Montessori materials are oriented towards engaging the child in bodily movements. They nurture the child's growth into his own body by the specific interactions for which they call. For instance, the repeated deed of pouring grains or water from one pitcher to another at once enhances the child's muscular strength and balance, while exercising his capacity for concentration. As he grows, the child naturally seeks the fine and gross motor skills that allow him to engage in more sophisticated tasks, and these can only be developed through habitual actions. These materials are designed to support the refinement of the child's movements and sensitivity to the world around him, of which the prepared environment is an interpretive microcosm. Already in the early work of pouring grains, the child is beginning to develop more precise movements in his hands, which Montessori rightly identifies as a major locus of intelligent human engagement with the world. Indeed, the formation of the child's grip and dexterity is a central occupation of an array of materials in the primary classroom, most of which have no express application to advanced manual tasks like writing, even as they indirectly prepare for such feats.[iv]

This indirect aim of helping the child to acquire coordinated movement is especially pronounced in the first lessons introduced to the youngest children in the primary classroom. Notably, the materials with which these works are concerned are also those that are most obviously identifiable as the ordinary

things of the home. Fitted to the scale of a child's body, brooms, brushes, and cloths equip the child to perform real tasks in the first community to which he belongs, the family. As recognizable and useful objects, these tools serve a limited purpose that can be brought to a satisfying fulfillment by the young child. At the same time, these "practical life" materials are already preparing the child for more subtle and conceptual work in future years. The child is gradually introduced to higher works in an ordered way at the point when he exhibits a readiness for them. While materials like graded geometric figures are more abstract than basins or even bells, their physicality is no less intrinsic to the work to be done with them. Rather, the child's bodily movement in cooperation with these materials must only become more precise, integrating and enhancing the habits and skills he had previously incorporated. The finesse called for by subtler materials is not a departure from the corporeality more overtly exhibited in basic works, but instead expresses the more acute embodiment of the growing child.

Higher materials guide the child in increasingly delicate sensory differentiation, which is at once somatic and intellectual. For instance, through such work the child learns the real proportions of pitches or shapes, which are neither simply empirical nor simply conceptual. Working with these materials, he arrives at the tacit apprehension of principles that increase his awareness of reality. As his sensitivity to experience is enriched, the child can more adeptly discern the orderedness and meaning of the world around him. His incarnate repetition of such activities is for the sake both of his organic perfection and of his knowledge of the truth communicated by the given work.

To better secure the reason for wedding the child's spiritual awakening to his sensory experience and bodily development, we can invoke in a cursory way the anthropology of St. Thomas Aquinas. Appropriating Aristotle, Thomas argues that the soul is intrinsically available to know the truth of anything, its immaterial form. This means that the soul is always related to things as intelligent, and is therefore in some sense already "interior" to all things even before actively knowing them (*anima est quodammodo omnia*). Correspondingly, beings are always already apt for being-known, and therefore exist from their beginning in relation to minds.[v] By its nature the intellect possesses in itself the principles for drawing forth this intelligibility of things, or wholes. Readiness for truth is original to the soul; it is always already "placed" before and with things, so that all one's acts of knowing are but the recapitulation and ratification of one's fundamental orientation. This inborn orientation towards the depths of things means that the soul is fulfilled precisely in conforming itself to truth. The soul more intensively belongs to itself the more it stands outside of itself in knowing and loving another whole.

For the human person, composed as he is of body and soul in their natural union, the knowledge of forms is always mediated by the sensory experience of individual, corporeal beings.[vi] For this reason, the human intellect is always capable of attaining to the universal, the immaterial idea, but only in and through its embodiment in the particular whole. Meaning is accessible in things, and only bodies let this meaning open to a human mind. The operations of the soul therefore depend in part upon the integrity of organs like the brain and the eye, or the muscular coordination of one's hands, through which one can become familiar with the material features of beings. It is on the basis of the knowledge to which sensory experience gives rise that the human person can apprehend, affirm, and desire the goodness of things. In the Montessori method, the young child's body develops precisely in and through movements that acquaint him with other things. As he incorporates these habits of relating to things, so does he contemplate and come to understand that which they express. These insights are indirectly accompanied by the child's growth in self-reflexivity, and, in turn, his liberation for encounter with the world, in relation to which he can exercise his own freedom.[vii]

2. Materialized Abstractions

We have begun by dwelling at such length with the growth of the child's body because this brings to light the significance of the material's own (artificial) body. Montessori insisted that each material be modest and beautiful so that it would call forth the interest and delight of the child. However, not only must its look be pleasing of itself, but its ordered appearance must directly serve its purpose of imparting meaning to the child using it. That is, its sensible shape is intrinsic to the material's role as bearer of truth. Its beauty is not a decorative embellishment deployed to market a ware that cannot commend itself. The truth that the material embodies is not a fact for the transmission of which the material is an indifferent device. Rather, its manifest beauty is of a piece with its expressive intelligibility. The definition and orderedness of these limited objects belongs intrinsically to their ability to indicate universal principles with which they are not identical. Montessori sought to capture this idea by referring to these objects as "materialized abstractions." The appearance of the thing's body, both in its pleasing form and in its specificity, is a precise place in which the child has access to the truth the thing represents.

His corporeal repetition of work with the material—his prolonged and immersive engagement with the visible, audible, and tangible thing—brings the child into "contact" with its inner meaning, as given through its surface. However, while this surface is encountered as transparent to a depth embodied in it, the child's task is not to wrest a secret content from a discardable frame. The surface is not an obstacle that provokes the child to a contest whose prize is a discrete *datum* behind that which he handles. On the contrary, the "resistance" that material thinghood offers the child's experience attests to the indispensability of its appearance. Only by receiving and learning the thing's limits does the child let it properly communicate that which transcends its singularity. It is of course true that the material is relative to principles that the child comes to understand on the basis of interaction with it, but the material can only impart that to which it points by possessing its own beautiful, good, and true integrity. This integrity extends to the whole of the material's externality. The accessibility of its ideal depth to a spiritual creature like a human person does not mean that the grasp of this depth renders the material's outside redundant; indeed, such "liminality" is precisely what ratifies the abiding significance of its appearance. For this reason, it is fruitful for the child to linger with the solid objects of the prepared environment, and to repeat his work with them. Though an inanimate artifact, the material is a whole that calls for a disciplined patience analogous to that which is operative in the reciprocal self-revealing of persons—think of the unsurpassable character of the human face. The material can elicit such patience because it is made in imitation of the wholeness that obtains in natural bodies, including the inseparable and unconfused union of depth and appearance in it.

The tablet, by contrast, exhibits at once a hybridization and a divorce of surface and depth. On the one hand, its screen eliminates the distinction between outside and inside. It would be easy to dismiss the tablet on the grounds of superficiality, and this accusation is not simply false. It is more to the point, however, to recognize that it is not *sufficiently* superficial. Through its absorption of all profundity and hiddenness into an exhaustively available simulation, the tablet deprives its icons of any capacity to signify. The ability to "move through" the apparent layers of folders and pages that shimmer flatly on the screen covers over the fact that these displays do not yield to any real penetration. Rather, each appearance merely links to another appearance that stands horizontally beside, rather than inside, the previous; window opens onto window. As such, the tablet does not afford a place for rest, but only a course for continual scrolling that never arrives. The ready visibility of the tablet's surface disguises its powerlessness to grant access to anything beyond itself. This depthlessness, however, means that there is also no definite appearance to take seriously; the mutability of its display seems to be entirely subject to its user's manipulation. The fact that there are necessary limits to this engineering by the operator is only regrettable, and each updated version of the tablet's technology will seek to further surmount these frustrating frontiers. The collapse of all interiority and provenance into the immediate spectacle

of the screen evacuates appearances of dignity, such that they no longer present a norm to be observed. There is nothing stable here that can challenge the child to stay, to listen, to obey.

On the other hand, the tablet also commits a thorough *dissociation* of form from content. This is evident first in the structure of the device itself. With no pretensions to beauty or meaning, the sleekness and plainness of the machine underscores its emptiness to carry whatever graphics can be arranged from the pixels it deploys. This neutrality of form to content is a lesson in itself: doesn't such plasticity represent art's improvement over the substantial fixity or "this-ness" of natural entities? The form of this non-holistic artifact militates against bodiliness; it neuters the flesh. By rebelling against the imitation of natural forms, such technology covertly supplants the primacy of these wholes and interprets them as deficient copies of itself. What this means is that it changes the sense of thinghood *tout court* according to its own paradigm.[viii] For the tablet, the limits of identity to which the boundaries of the body attest are themselves impediments to power that ought to be surmounted.

This bifurcation of form and content is repeated in the applications stored on the tablet, of which we are here considering those manufactured for the education of young children. Such programs are designed to convey units of information to their users with maximum efficiency. For the purposes of the classroom, their form should be aimed at keeping the child transfixed long enough for them to pass on ideas or lessons as promptly, clearly and distinctly as possible. In natural things, the ideal (immaterial form) is only found within the real (the existing whole) that it pervades and organizes from within. Montessori materials imitate natural beings by embodying the ideas they are made to express. In wholes, the disclosure of the ideal is hardly automatic. The programs employed by tablets, by contrast, isolate ideas in a way that even overcomes the need for attention. The consequence of parting truth from complete beings is not simply that truth is thereby disembodied, rendered ghostly, but, more paradoxically, that truth loses its properties of immateriality and transcendence. It is hardened into a packet of data that is capable of being downloaded onto the child's memory, understood here as circuitry. At issue in the difference between incarnate and virtual mediation is the opposition between formation and conditioning, between cultivation and programming, between evocation and violence.

The tablet's materiality frames a display that hastily denudes itself in favor of a content to which it remains entirely incidental. The diaphanous quality of the Montessori material, its capacity to express, depends on its own opacity, even "modesty." The tablet's self-effacement, on the other hand, conflates teaching with input. By their simplicity and obdurate definition, Montessori materials invoke in the child a certain disinterestedness. This reflects a sense for the material as an "other" to the child, which withstands a forward advance. It gently invites the child's exertion in engagement with it, whereas the tablet uses its putative boundlessness to mesmerize the child into docility. While virtual education takes the person as a resource susceptible to being produced, incarnate education prepares its student for living in companionship with other beings.

What, then, does this technology say about the child's relation to the world? Virtual mediation, we contend, betrays a misplaced concern to protect the child from his environment and the challenges it presents, challenges that should serve to enliven the child's freedom to respond. The tablet seeks an attractive relatability that unwittingly prejudices the child against the uncomfortable formidability of things. Its flux of simulacra tells the child that his environment is a frustrating or threatening obstacle, and bespeaks a sense of freedom as the clearing away of inhibitions set by nature. Bodily involvement is superfluous for the acquisition of "truth." By sparing the child the patience needed to receive and enter into another, the tablet partially blocks the child's contact with a world of wholes, none of which can be controlled by the single stroke of a fingertip. This mode of relating to things prevents the child from finding himself at home in this world.

3. Mediating Direction

The determinate body of each Montessori material structures the child's interaction with it from the outset. He must continually adjust himself to the concreteness of something that precedes and guides his initiative. Indeed, the whole of the child's work in the prepared environment comprises such adjustment or correspondence to the anterior order of things. The teacher in a Montessori classroom, whom Montessori preferred to speak of as the "directress," has an integral role in mediating the child's standing towards the material. That she "directs" implies both that she is herself relative to a truth of which she is not the arbiter, and that the child's knowledge of this truth must come through an experience to which she can only invite him. In this sense, she stands with the child in his act of discovery.

The directress can be efficacious in her role first because she is herself determined by the actuality of the materials in the prepared environment. To be sure, it is she who arranges the environment to best foster the development of her pupils. Likewise, she is responsible for judging when a child is ready to work with a new material and for introducing the child to the right use of that material. However, in all of this the directress always serves the event of encounter between child and material. This means that she first must take a contemplative stance towards the materials, since it is such a stance into which she seeks to bring the children in her class. More profoundly, however, it is the child who is the first object of her reverence, and it is from him that her action must take its measure.

All forms of education can succeed to the extent that the teacher has the good of the student in view. It is the teacher's love of the student and her desire for his perfection that precedes and enables the student's learning. In its very form, the method employed in the Montessori classroom embodies this pedagogical structure of love in a particular way. The directress initiates the encounter of a child with a new work when she recognizes that he has incorporated the kind of habits that prepare him to successfully engage this material. She begins in contemplation of the child, out of which she proceeds to invite him to receive a lesson in the new work. She goes on to prepare the child for an ordered use of this material by modelling to him the pattern of this interaction. The child's first exposure to a work, then, calls for obedient attention to the movements of another: the child is introduced to the material as he attends to the concentration of the directress on her task. The directress educates him by looking towards the work, and he discovers his work by contemplating his directress. Through her objective enjoyment of and reverence for the material, on display in her peaceful exemplification of its proper use, the directress liberates the child to answer her by entering into his own relationship with the material. It is by turning her focus to the work she is demonstrating to the child that the directress walks alongside the child towards his own intimate awakening to truth.

Montessori speaks of the directress as the "dynamic link" through whom the child is initiated into his vis-à-vis meeting with the objects of the environment. Often, such modelling will have to be repeated before the child has internalized the form of action he himself must exercise. However, once the child has been shown the pattern he should follow, the directress withdraws to leave him to his work. She commends the child to his own proper task, sending him away from herself, as it were, into the risk of an encounter. Having begun his engagement with a particular material by beholding its exemplary use, the child goes on, in his imitative appropriation of this pattern of action, to find in the material itself the norm of his interaction with it. The structured use that he has learned from his directress is what opens the space for him to discover the thing. Throughout this process, the child is met with an order that is prior to his will, into which he has been personally initiated. At the same time, he has been prepared and released to venture his own attempt at receiving what the material itself has to say. It is vital that the directress not anticipate the child's work by clearly spelling out a lesson that the child is to extract

from the work. Likewise, this work is not a riddle that the child can be “over and done with” once he has teased out a solution. Rather, learning happens for the child in the slow process of merely remaining with the material, which is what its “right use” supports. It is in this doing, which is no less contemplative for being “experimental,” that the child incorporates the principles materialized in the object. The directress does not abandon the child to fend for himself, but gives him all he needs in order to fulfill his work. Likewise, she does not leave him to indulge his own whims. There is room here for puzzlement and for the slow ripening of the child’s insight, but the child’s risk is pervaded by the atmosphere of the original trust that the directress has exhibited towards him, which carries his own willingness to persevere. In this way, the directress remains present with the child, eliciting and enabling his own action, without replacing or otherwise preempting it.

The child becomes immersed in repetition of a work, in making new attempts at incorporating its *logos*. To observe a child in the prepared environment is to find him absorbed in the slow exercise of abiding with the work before him. At its best, the environment facilitates the child’s ability to inhabit the material to which he is attending; he turns his focus away from himself to imaginatively rest in the thing before him. Such indwelling is the condition for the child’s grasp of the meaning immanent in a given material. At the same time, it is this grasp—which occurs in and with the work and not merely “after” its completion—through which the child realizes and unfolds his freedom. The growth of the child that it is the purpose of the material to facilitate is never focal in the child’s interaction with it, but his self-abandonment to a task that draws him beyond himself is the very place where he comes to himself.

The child thus discovers himself precisely where he loses himself in meaningful work. Just as the directress pointed away from herself in introducing the child to the material, so too does the child forget himself in focusing on his work with the material. The instruction of the directress was oblique, disinterested: she made no objectives explicit other than to interact in an ordered way with the material. This is reflected in the child’s own quiet absorption in the material, which is itself the source of his enjoyment and repose, not his own success in working with it. However, the material can serve the end of bringing truth to light for the child and thereby of expanding the child’s sphere of action only because it is itself worthy of the child’s attention. The indirectness of the child’s aim has to do with the nature of the material itself. It is not that the material uses subterfuge to sneak in teaching while distracting the child with amusements. Rather, it only has the power to lead the child beyond itself because it is itself an engaging, attractive, and good whole in which the child can immerse himself. Because the work communicates a transcendent meaning without directly bypassing its surface, it is capacious enough for the child to rest in and with it.[ix]

The self-forgetfulness that characterizes the child’s indwelling of the material is quite different from the oblivion instilled by the fascinating diversions that virtual education relies on for the attainment of its goals. The “edu-tainment” that programs on a tablet provide is a tactic that beguiles the child into learning supposedly boring content through a supposedly fun form. By this technique, such programs mask a false view of work (as necessary but unfulfilling drudgery) with a false view of play (as a fantastic escape from limits). Despite these distortions, there is a true sense in which the child’s absorption in his work shares in the nature of play.[x] An objection sometimes posed against the Montessori method is that it neglects the vital place of play in the child’s life, and prematurely seeks to mold the child according to an adult form of labor. To the contrary, the child’s bodily handling of the material, his prolonged abiding with his work, and his availability to the gradual self-disclosure of the material all integrate dimensions proper to child’s play into his education. These dimensions all converge on the character of the work as its own relative end, interaction with which is good for its own sake. Just as the grace of play is pervaded by the child’s trust in the faithfulness of his parents and

his original experience of the world's goodness, this play-like work is predicated on trust in the real, as embodied in the materials themselves. The material yields itself only when the child gives himself to it attentively; such disinterested and satisfying engagement of one's freedom is as much play as it is work.[xi]

Montessori instruction is contemplative in its very form, and therefore reveres the child as good prior to his work and the material as good prior to its use. By contrast, we argue, the tablet mobilizes an order of learning that is essentially productive. Virtual mediation is predicated on an implicit worldview in which things are vacant of intrinsic goodness, and its whole enterprise contributes to the reification of the living child. The cybernetic canon of factuality (not truth) and value (not goodness) is functionality. It is this outlook into which the tablet conditions, or programs, its operator. This can be more clearly seen in the difference of the tablet's mechanics of transmission from the indirectness with which the child learns from the Montessori material. The virtual mode of instructing sets for itself the task of equipping students with the know-how needed to perform certain pointed operations. Programs are designed to efficiently convey information to the child, and thus take a rectilinear approach to this data-transfer. The passive "learning" that the tablet supports is a uni-directional delivery of facts or ideas that treats the child technologically, insofar as the child is meant to record the input that is sent to it. Such imposition fails to liberate the child to the kind of freedom that is inherent in play and all feats of excellence. This mode of education represents a kind of training, but does not call the child to an incorporation of habits that allow him to more readily receive the manifold world about him. Indeed, the ulterior motives of this training treat the child as a functionary rather than as an agent whose flourishing can be regarded as a worthy end in itself. At the same time, the tablet also stands in the place of the teacher, since it holds all the information the child needs. In principle, if not yet in fact, the teacher is left with the role of maintaining the technology and regulating its use, rather than serving as the indispensable guide into the mystery of being.

The mode in which the directress leads the child to understanding, the child's objective in interacting with a material, the material's access to the truth it communicates: all of these have an oblique rather than rectilinear trajectory. The directress *lets* the child discover the material, the child *lets* the material reveal itself to him, and the material *lets* the child indwell it—and here *letting* is a mode of *enabling*, of *actualizing*. This three-fold obliqueness of teaching, learning, and mediation preserves each of the three members of the educational event—directress, child, and material—from functionalization. The result of this indirect approach is a surprise: the "lesson" comes forth from the child as though the insight has its source in him. Indeed, this is often regarded as a hallmark of the Montessori method. We can affirm that incarnate education enables the child to "teach himself," but we must be careful to guard against obvious misunderstandings of this claim. By no means is this self-directed learning and discovery exercised as a self-formation divorced from and set against authority and dependence. In the first place, the child lets the material he encounters have its effect on him. Likewise, it is the form that he has received from his directress, as well as her self-withdrawing entrustment of him to his work, in which she continues to accompany him "invisibly," that has yielded fruit in his richer knowledge and freedom. The "self-teaching" of the child is the success of the directress in him, and his discovery is always drawn forth through a more basic receptivity.[xii] Thus, it is in pointing to the material that the directress remains intimately present in the child's acting without propping or substituting his own efforts. Through her surrender, she frees him so that the truth which the material mediates can come forth from the child himself—as if, *mirabile dictu*, for the first time. It is in this sense that incarnate mediation has a form that shares in that of love. Compare this to the tablet, which, in its rectilinear management and conditioning of the child, replaces and obscures the personal role of the teacher, and thereby ends up stifling both the child's capacity *for* surprise and the child's capacity *to* surprise.

4. Discovering Reality

Throughout we have been speaking of the use of materials for the purpose of freeing the child through his encounter with truth. How can we hold together this utilizing of the material with the affirmation of its wholeness? Doesn't such instrumentality amount to the same function served by the tablet or any other media? In the end, aren't the two essentially convertible with one another?

In the prepared environment, it is the material's own goodness that draws and empowers the child's agency in relation to it. While the child's interaction with the material is an act that is performed for its own sake, this end is nevertheless instrumental towards the child's own awakening, development, and flourishing. The material is an educational tool. However, his contemplation of the material for-its-own-sake is the first lesson that the child is meant to learn from this instrument. Yes, the material's ultimate end, in the context of the Montessori *casa*, is to serve the emergence of the child into awareness of truth and free self-movement. That is, even as the end of the child's attention and bodily engagement is the contemplative interaction with the thing, this work is still subordinated to the child's liberation through his work. Indeed, the child's initiation into the reception of and involvement in reality is always and at once the formation of his own creative self-expression *vis-à-vis* the world. The person's conscious spontaneity always grows and is realized in correspondence to the prior order of the intelligibility and desirability of things. However, this points to the truth that the educational material as means is not a dispensable vehicle whose function is the efficient relay of data; the child is liberated through and in his work only because the material has its own integrity and finality (even as symbolic). Here utility and gratuity are not at odds with one another. The material's status as its own subordinate end is the *sine qua non* for the higher end of the child's discovery of freedom, for it is the nature of freedom to adhere only to the good.[xiii]

If his sensory experience of materials engenders in the child the consciousness of certain principles, it is his integration of these principles that blossoms in the child's fuller relationship to reality. The material does not only disclose a teaching *about* the world, but quietly transforms the child so that the world itself is open to him in a new way. His new awareness of reality frees him to engage with things more subtly and more intimately. As the call of the goodness of things becomes more perceptible to the child, so can his embrace of things be more ample and confident. This is expressed within the prepared environment in the progression of materials: the insight afforded by an earlier work yields access to a higher work. The fact that the more advanced child has more options of works to choose from only subordinately reflects the more fundamental truth: this child is freer to enter into, dwell with, and rest in the reality of things. He thus has a more comprehensive vantage, and from this follows the greater number of objects that are available for his embodied contemplation. Choice is thus integrated within the ordering of freedom. This returns us to the question, posed at the beginning of this article, of what Montessori means by independence. Our reflections on the child's growth, on materialized abstractions, and on the role of the directress make it clear that Montessori sees this independence as correlative with formation, with being-ordered from without. Far from the mere approbation of the child's ability to wield his own will apart from the direction of another, independence here means the child's ability to consciously and imaginatively assent to the world. The child is shaped by the actuality of a world that faces him in advance. His entry into relation with this world demands a process of growth, which necessarily draws upon the developing person's cooperation. Incarnate education is thus a strenuous and rewarding *feat*. However, this does not mean that the world stands imposingly before the child as an obstacle to be overcome. The freedom at which the formation of the child arrives should not be regarded as a kind of mastery that subjects the conquered realm to the productive powers of its colonist and pioneer.

The victory of freedom is commitment to the real. Freedom has its satisfaction, its realization, in embracing the prior truth and goodness of the universe. This does not represent a passive posture, for such an embrace engages the entire person, and serves one's perfection. Nor does this victory entail an assertion of power or the defeat of an opponent, but the total affirmation through which one can enjoy communion with another. Freedom is not attained in opposition to that which oneself is not, but in a reciprocity with one's other that includes assent to the other's difference from oneself. The child is "independent" to the extent that he comes to freely entrust himself to, participate in, and abide with the plenitude of the reality into which he has been conceived and born. He is carried into this movement by the loving freedom of his elders and the anterior goodness of things, but is carried in such a way that his own spontaneous collaboration can arise from his maturing spirit.

5. Sacramental Things

The Montessori method embeds a *Weltanschauung* according to which the prior wholeness of things discloses the criterion for our relation towards them. The child's work in the prepared environment is fundamentally responsive and abidingly contemplative. The view that well-ordered artifacts have an integrity of their own—and, by virtue of this integrity, symbolically mediate truths that transcend their particularity—is a view that is inwardly open to a metaphysics of creation. Things possess their own intelligibility and goodness because they participate in the being of the God who is intimately present to each creature that he grants to be, preserves in existence, and releases to its own substantiality and proper activity. To own that things are good before human labor and fabrication makes them so is to hold that things are naturally epiphanous of a divine goodness that precedes them ontologically and upon which they constantly depend. Thus, the density of existing wholes can indirectly elicit the human person's innate desire for happiness in communion with God. Indeed, this affirmation of the finite world is already implicitly religious, and is even ingredient in any adequate sense of God as eminently worthy of grateful praise. It is no coincidence, then, that Montessori saw her method as culminating in worship; in fact, she explicitly conceived this method in light of the Catholic liturgy. It is appropriate, therefore, to speak of Montessori's approach to her materials as informed by a sacramental vision of nature, and therefore as an initiation into what Balthasar referred to as the "piety of Being."^[xvi]

We have argued that virtual education is an obstacle towards an embrace of reality as holy, and is thus an inhibitor of the child's freedom. Virtuality is but the currently-trending model of nihilism.^[xvii] This is why the large-scale adoption of tablets in schools is so distressing and dire. If embodied contemplation, of which the Montessori method is but one possible expression, frees the child for fruition of the world, this is because it takes seriously the unity of the ideal and the real in things both natural and artificial. In this way, incarnate mediation forms the student, indirectly but truly, towards the freedom of thanksgiving manifest in adoring and consuming the Eucharistic body and blood of Jesus Christ, which brooks no simulation.

[i] The work of Martin Heidegger represents one of the most robust efforts to retrieve the category of the thing as a viable matter for philosophical reflection. See the essays collected in Martin Heidegger, *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: HarperCollins, 1971).

[ii] "To be a child is to owe one's existence to another." Hans Urs von Balthasar, *Unless You Become Like This Child*, trans. Erasmo Leiva-Merikakis (San Francisco: Ignatius Press, 1988), 49.

[iii] Aristotle, *Physics* II.1-3 (192b, 8^a195b, 30); III.1-3 (200b^a202b, 30). Also, Maria Montessori, *The Discovery of the Child*, trans. M. Joseph Costelloe, S.J. (Amsterdam: Montessori-Pierson, 2007), 57^a65. For instance, on p. 63: "[The child] grows because his potentialities for life are actualized, because the fertile seed from which life comes is developing according to its natural destiny. ... Life increases,

becomes manifest, and perfects the individual, but it is confined within limits and is governed by insuperable laws. Therefore, when we speak of the freedom of a small child...we understand by this the freeing of his life from the obstacles which can impede his normal development.”

[iv] Montessori wrote a number of eloquent reflections on the significance of the hand for human intelligence and freedom, in which she also explains the place of the hand's development in the prepared environment. See, *inter alia*, Maria Montessori, *The Secret of Childhood*, trans. M. Joseph Costelloe, S.J. (New York: Ballantine Books, 1966), 80–87; and *The Absorbent Mind*, trans. Claude A. Claremont (Amsterdam: Montessori-Pierson, 2007), 136–44.

[v] The ground of this intelligibility is, of course, its ever-prior relation to the divine Intellect by which its formful existence is always sustained. Cf. Aquinas, *Summa Theologica*, I. Q. 16, A.1. For more on this issue, see Pieper's profound study, *The Truth of All Things [Wahrheit der Dinge]* published in Josef Pieper, *Living the Truth*, trans. Lothar Krauth (San Francisco: Ignatius Press, 1989), 9–105.

[vi] See, for instance, Aquinas, *Summa Theologica*, I. Q.84, A.6; *De Veritate*, Q. 10, A. 6.

[vii] For a complementary discussion of childhood development in light of Thomistic principles, see Martin Bieler, “Attachment Theory and Aquinas's Metaphysics of Creation” in *Analecta Hermeneutica*, Volume 3 (2011).

[viii] For more on this inherently pedagogical property of technology, see George Parkin Grant, *Technology and Justice* (University of Notre Dame Press, 1987).

[ix] This is what is at stake in the good opacity and superficiality of the well-ordered thing. The trustworthiness of its appearance invites the child to know and enjoy it. The non-immediacy of the depth that its surface begins to disclose affords room for the child's intellect to inhabit it.

[x] The Christian philosopher Ferdinand Ulrich offers a remarkable reflection on the play of the child. Pondering the child's act of building a tower from blocks of wood, Ulrich notes how the child lets his identity emerge precisely in going outside of himself into the thing he makes. Ulrich thematizes the indirectness (*Indirektheit*) according to which the child comes to himself in play, and shows how this same indirectness is recapitulated in his mother's relation to him: sharing his delight in the tower, rather than drawing attention to him as builder, the mother commends the child to personal flourishing in his creative deed. Ulrich's perspective here has thoroughly inspired our meditation on Montessori education. Ferdinand Ulrich, *Gabe und Vergebung: Ein Beitrag zur Biblischen Ontologie* (Freiburg: Johannes Verlag Einsiedeln, 2006), 354–70.

[xi] While we don't want to confuse work and play, we should also see their distinction as inside of their more basic coextensiveness. “Children are not like adults./For children playing, working, resting, stopping, running, it's all one./Together./It's the same./They don't make the distinction./They're happy./They have fun all the time./As much when they work as when they play.” Charles Péguy, *The Portal of the Mystery of Hope*, trans. David Louis Schindler, Jr. (Grand Rapids: Eerdmans 1996), 28. We might go further and say that this coextensiveness of work and play obtains also in all adequate forms of adult labor.

[xii] Commenting on Ferdinand Ulrich's understanding of gift as the enablement of another's fruitfulness, an event which Ulrich characterizes with the Kierkegaardian paradox that “love presupposes what it does,” Stefan Oster reflects on the pedagogical act in terms similar to our own. He writes: “The child brings forth entirely ‘by himself’ the very same thing that the educator proposed to

him as a kind of 'future.' The child could do this because the proposal preceded him, lying as it did in the freedom of the educator. At the same time, however, what the child brings forth had always lain in him, was always the presupposition of the educator's love. We thus return to Kierkegaard: Love presupposes that what it achieves in the other is already there." Stefan Oster, "Thinking Love at the Heart of Things: The Metaphysics of Being as Love in the Work of Ferdinand Ulrich," *Communio: International Catholic Review* 37.4 (Winter 2010): 660-700.

[xiii] Analogously, craft, which first takes its cue from the thing made and serves this work as its own intrinsically worthy end, is always directed beyond itself to the flourishing of persons, both that of the worker and those whom his work will serve. Here the instrumentality of that which is made is not at the expense of its relative finality. Likewise, the instrumentality of the worker towards his craft, far from an instance of abasement, is the very path along which he is liberated into flourishing. So it is that Pope Saint John Paul II wrote that work "is not only good in the sense that it is useful or something to enjoy; it is also good as being something worthy, that is to say, something that corresponds to man's dignity, that expresses this dignity and increases it. If one wishes to define more clearly the ethical meaning of work, it is this truth that one must particularly keep in mind. Work is a good thing for man—a good thing for his humanity—because through work man not only transforms nature, adapting it to his own needs, but he also achieves fulfilment as a human being and indeed, in a sense, becomes 'more a human being.'" Pope John Paul II, *Laborem Exercens*, §9.

[xiv] St. Thomas Aquinas, *Summa Theologica*, I. Q.8, a.1; Q.104, aa.1-2; Q.105, a.5. Perhaps it is not too audacious to think of the invisible role of the directress in the work of the child as an image of God's liberating but hidden presence to all things.

[xv] For more on this, see the collection of essays *The Child in the Church*, ed. E.M. Standing (Chantilly: The Madonna and Child Atrium).

[xvi] "[A] 'supernatural' piety, oriented to God's historical revelation, cannot be such unless it is mediated by a 'natural' piety, which at this level presupposes and includes a 'piety of nature' and a 'piety of Being.'" Hans Urs von Balthasar, *Glory of the Lord*, vol. 1: *Seeing the Form*, trans. Erasmo Leiva-Merikakis (San Francisco: Ignatius Press), 447.

[xvii] Universal (transcendental) goodness implies the existence of an infinitely transcendent Good. Indeed, goodness is the objective reflection, inscribed into created being itself, that the creature has been comprehensively loved into existence by God. Likewise, the foundation of the truth of each thing is its relation to the divine mind by which it is known into existence. The systematic denial of divine transcendence thus redounds on our relation to the world, reducing the horizon of meaning to immanent evidence, and ultimately evacuating worldly things of prior goodness and truth. In its place, man arbitrarily dictates the value of things. Having deprived himself of a sense for the transcendent, he has to compensate for what he perceives as the innate deficiency of the world through his assertive act of "estimation" (Nietzsche). In this case, goodness has been collapsed into the immanent act of the will, whose power is not actualized by the call of a beloved (God, person, world) that precedes it, exceeds it, and makes a claim upon it. Whether a person or an institution identifies as atheist or not, a forceful relation to the world that is primarily experimental, constructive, and consumeristic betrays that such a forgetfulness of God has already effectively taken place. "God is dead, and we have killed him." What preserves the child's original wonder at the felicitous blessing of existence is his opening into the worship of the transcendent God, for the promise of this relationship to God is already latent in one's most basic experience. The child's naïve and innate confidence in the world and in his parents, the confidence out of which he can freely play, is saved to the extent that it develops into a more all-

embracing trust—namely, faith in the ever-faithful God. Worship thus leaves open the space in which persons can recognize and assent to the goodness of things; conversely, awakening to such goodness is already a movement that aspires towards worship. In the context of our study here, incarnate education (manifest first of all parental rearing) enables the human person to grow into such doxological freedom in part by fostering his reverence for the givenness of things as bearers of an ever-greater meaning.

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Education and Technology

MARGARET HARPER MCCARTHY

Dear Readers,

In this fourth issue on education we turn to the theme of technology once again. During the year we focused on the Home, we dedicated an entire [issue](#) to it. And since the home is the paradigmatic school, you will find in that same issue articles and reviews already pertinent to the theme of education. In this issue, then, we pick up where we left off, even while we face the question in a more direct way, as it relates to education, and in the face of all of the trends to put iPads on the desks of every High School student, and into the hands—even the bouncy seats—of the youngest of children . . . all in an effort to “edu-tain” them.

We do not wish to hyperventilate about technology. But neither do we wish to succumb to it uncritically as though it were simply inevitable (and surely this second temptation is the greater one). There are important questions which cannot simply be dismissed with that universal conversation stopper: “Luddite!” Therefore, just as we ask about our food: “is this good for me?”, or about our cars: “is driving this good for the environment?”, so too we ask about our educational devices: “Are these good for our children—or for us—in the pursuit of education?”

To answer this question we pose a series of other questions. We ask about the *medium* of educational devices (not just their content). We ask, then, about the *students* using them, keeping in mind, especially for the young: the role of physical activity, the physical environment, and real presence (of the teacher), as well as the need for habits of concentration and attentiveness and the capacity for wonder.... all for the sake of a robust engagement with and knowledge of things. Finally, we ask, as always, about *education* itself: what is it about, and what is it for? Is it an encounter with reality, for the sake of knowing and loving it? Or is it merely the acquisition of skills (clicking, swiping, downloading, etc.) so that that same reality can be re-programmed, re-purposed, re-assigned, in short, used for one’s own independent and sovereign ends. Simply by asking these questions we step out of the field of the inevitable—and its marketplace—and subordinate the technology in question to what is said to be its purpose: education. We become free to think. In this spirit, we invite you to think with us.

In this issue we have a host of feature articles. We look at the founding father of ‘Media Studies’: Marshall McLuhan, whose dictum “the medium is the message” is being confirmed in our day, in spite of all the talk about the neutrality of media and its responsible use (“digital citizenship”). We also cover the role of material (vs. virtual) mediation privileged in the pedagogy of Maria Montessori; the ‘online classroom’ used by homeschoolers hungry for the Socratic method; and the effect of the “Elephant” in the living room” (TV) on the attention, interests, and energy of the young. Finally we have an analysis of recent studies which evaluate how much the various edu-tech programs have measured up to the goals they set for themselves.

Among the authors we review here we have one of the first to write on the topic of virtual reality, Sr. Timothy Prokes, and one of the current leading experts on the effects of that same reality on our minds and relations: Sherry Turkle. The classical educator and social critic, Anthony Esolen who writes on the general tendency towards compulsion (and loss of thinking) is present here, as is the philosophy

doctorate-turned-motorcycle mechanic, Matthew Crawford, who writes on the paradoxical loss of knowledge (not to mention freedom) in the 'knowledge economy' for which schools are preparing their graduates. Finally, joining this constellation of current thinkers is the late Jean Leclercq, a Benedictine monk, who shows how it is monastic education which pursues the broadest of worldly interests, precisely because of its *depth*, its dogged search for God (*quaerere Deum*), Creator of the world.

Our writers in this issue include the head of a High School, a software developer and former head of a university technology department, a Montessori teacher, home-schooling parents, IT technicians, professors of philosophy and theology, and finally author and playwright, the self-described "Jew with an Arab last name, belonging to the Catholic faith," Fabrice Hadjadj.

Our articles and reviews look at the question of educational (and entertainment) technology from many angles. at the heart of each of these offerings, however, is the question posed by Peter Casrella: "whether and how deeply we need to encounter truth incarnately." Answering in the affirmative assumes that the task of education remains as it ever was: to know and love the real, and cultivate and liberate the soul thereby. As for technology, educators with this goal in mind will examine each new product which comes on the market. Does it assist us in that task or not? Is it an adequate tool for the message we wish to convey? Or is it the kind of contraption that sends an entirely different message about one's relations with the real...and its limits? (On that note, don't miss Matthew B. Crawford's thoughts on the "Mouskedoer" in newer Mickey Mouse club cartoons as related in Lisa Lickona's review of *The World Beyond Your Head*.)

In any case, if the encounter with the real and the cultivation of the soul is what is in mind, educators will always privilege what can in principle *bear fruit* as our Re-Source author, Fabrice Hadjadj notes, beginning with that which exists in the living form-filled material world. Accordingly, they will subject each new invention to the crucial question: does it help us to encounter truth *incarnately* or not? In other words, does it educate?

No hyperventilating then...just a little thinking!

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Rediscovering the “Language of Wood”: Why Can’t We Just Substitute “Be Fruitful and Multiply” with “Connect and Download”?

FABRICE HADJADJ

The plough is [no longer] worthy of any honor, our lands [are] neglected, robbed of farmers, and the curved pruning-hooks [are] beaten into solid blades. (Virgil, Georgics, I, 506–08)

Out of Zion shall go forth the law, and the word of the Lord from Jerusalem. He shall judge between the nations, and shall decide for many peoples; and they shall beat their swords into plowshares, and their spears into pruning hooks. (Isaiah 2: 3–4)

It may be that we have not so much lost the spirit as matter. It may be that the loss of meaning we talk so much about today is not the loss of the meaning of spirit, so much as that of matter.

When someone loses the spirit, there is still his body, his body which remains as an anchor, an access point, the hope of a return: the hope that he be reborn, that through contact with the flesh and the senses, he return present to the world, to his neighbor, to everything that is offered to him. But when someone loses matter, when a man, who is not an angel, leaves the body, when a man, who is not a beast but always still an animal, and not a pure spirit, when a man becomes disincarnate, and tries to dematerialize, what is left for us to take him by the hand? What is left for us to embrace him? What is left for us to touch him, for the warmth, for the simple presence without words? So maybe he has not so much lost the spirit, as the base of his spirit, the anchorage of his spirit: the weight, the thickness, the concreteness, the sensitivity, the touch, and, I would even say, the fabric of his spirit.

The fact that we have lost touch with materiality can be seen in a particular way in the modern university.

....

The modern university is scientifically, voluntarily, ostentatiously a block of glass and functional cement. Its high-tech structure, connected through and through to the future, rises with pride. We make jokes about the old stone as with so many *stelae* of the past. This functionality, experts tell us, is the best thing for teaching: it is apt for electric sound, for a smart board, for an uninterrupted network with a search engine that delivers all the texts and images of the cultural and scientific inheritance in two clicks. We are in the *e-school* which practices *e-learning* in view of an enhanced humanity, humanity with a boost.

But you see immediately that in such a context the very nature of teaching changes. What is presented on your screen are not the works, but the scanned images of the works: a Pietà without marble, a

Sistine Chapel without the chapel, a *Summa Theologica* reduced to a sum of formulas; a *Divine Comedy* without the time and space that would allow for a real—vocal—unfolding of its *canti*. Teaching has at this point been reduced to the transmission of information, and no longer opens us to the truth of things.

Indeed in order to begin to open ourselves to the truth of things we would have to be surrounded by things that invite us to do so through their density. In order to open ourselves to the truth of things, we would have to be surrounded by things which, by their very hospitality and beauty, make us consider things with respect. Some might think that there is no difference between the library of Trinity College and a database. One might argue that the database is more useful, because it can be carried in a pocket on a USB stick or on an external hard drive. But can you live in an external hard drive? With the library, there is the large park outside, the useless vastness of the halls and of the large windows, the humble solemnity of the slabs of rock which hold the memory of the forests, the hammered leather of the bindings which preserve the memory of the animals, and the physical closeness of the teacher, the physical closeness of that fellow-student or of that pretty co-ed we don't know; and then the pen, the ink, the heavy paper which forces us not to waste and on which we cannot write just anything: all things which don't serve us in our work, which don't provide information for our topic of research, but which sustain us in our presence to the world, and which remind us of the generous density of existence.

The voice amplified with the microphone and not with the nobility of the place and of the materials that provide the shield for the human voice, the amplified voice in a functional space has already lost its authentic range. There is no longer the table of the *Symposium* nor the garden of Epicurus, nor the room of the Academy with a sanctuary dedicated to Athena, nor the boulevards of the Lyceum where Aristotle taught walking, nor that portico of the stoics where a fresco recounts the battle of Marathon. Above all, there is no longer that boat on the shores of Lake Tiberias, nor the mountain of the Sermon on the Mount, nor the colonnades of the Temple nor the house of the Upper Room where I imagine a very simple and beautiful drape made of lamb's wool. The words might be the same, but you don't hear them in the same way any longer. They are no longer surrounded by the same things; they no longer keep company with the same imagination: because imagination constitutes the borderline for a creature who is at once rational and animal. The imagination constitutes the hinge that joins our intelligence and our senses. When the Sermon on the Mount is recaptured in a block of cement, when the *Symposium* is explained from a lectern and students are tested on it with a quiz, when the *Nichomachean Ethics* are divided up on a slide in a Powerpoint presentation, the words are perhaps the same, but the meaning is changed, because the setting, or, the matter, has been changed. Knowledge has lost its savor. The texts have lost their texture. We move along without ever having gotten into the material.

Let us now consider the two terms at the heart of our topic: "crisis" and "culture." For a modern person the word "crisis" refers above all to the medical field, to that decisive moment in the course of a disease that can lead either to the restoration of health—in that case we have a "happy crisis"—or mortality—in which case it is a fatal crisis. Currently the word refers to the economic or financial crisis, and for deeper analysts, to an anthropological crisis, with the difference, however, that the crisis perdures, instead of being temporary, having lost its character of "judgment" or "discernment," suggested by the etymology. The journalist declares: "We are in a situation of crisis" and wants to say simply that things are going badly, and all the way down to the very structures of society. Our imagination turns immediately to the indexes of the stockmarket, a rise in the price of gasoline, lines of unemployed persons in front of the employment office, problems getting consumer credit for Christmas.

As far as the culture is concerned, this term evokes above all a “diaporama” of museums, theatres, cinemas, books, concerts, and even good wines. To be cultured consists in having read great authors, seen great films, listened to great music, tasted the great vintages, and being able to speak about these in the best of company. In this manner, culture is reduced to a sum of cultural products such that the most you can expect is that they be available to the greatest number, namely, distributed to the supermarket and possibly downloadable. From this point of view, the internet, iTunes or BitTorrent have contributed enormously to the diffusion of culture, and probably more than any professor whose mission would be only to transmit these products.

Now, here is what I think: this way of understanding “crisis,” and of trying to resolve it, is already the sign of an even greater crisis; and this way of understanding the word “culture,” and of singing its praises, is already the sign of the greatest unculture. In both cases we interpret the words having lost the image of that to which they originally referred, namely the agricultural image. The word “crisis” derives from the Greek *krino*, whose oldest usage is found in the *Iliad* (V, 500-502): “while men stand winnowing the crop, when Demeter, with her golden hair, separates (*krino*) the grain from chaff in the rushing breeze, and piles of chaff grow whiter...” These verses are difficult to grasp. I buy bread at supermarkets which are far from peasant life. I belong to a generation that has never seen anyone winnow, and that doesn’t have a clear idea of what straw is or the action of separating the grain from it, a generation that doesn’t see what the the original “crisis” is.

As for the word culture, its tie with agriculture, lost to our imagination, is still immediately audible in the word itself. Some cultural sources, moreover, have told us that it was Cicero, in the *Tusculanes*, who transferred the term from the cultivation of the land to the cultivation of the soul. The famous citation can be found on all the search engines such as Google, Ask and Bing: *Cultura animi philosophia est* (*Tusc.* II, 13). But as always happens with search engines and encyclopedias, it’s really an avalanche [picconata], not a hearing, a sampling not a reading. (Let us observe that the term “reading” also refers originally to a rustic action, that of gathering fruit from a tree, or of picking ears of wheat to bind them in sheaves.)

When Cicero defines philosophy as the “cultivation of the spirit,” it is to respond to the objection of the interlocutor. According to the latter, it is impossible to praise philosophy because “its most able teachers are not always honest persons.” Thanks to the agricultural analogy, Cicero is able to respond in a two-fold manner. On the one hand, in cultivation, it is not enough to sow a seed; one must also prepare good earth, because the best grain cannot grow in a barren field. (It is a suggestion which will be appear in the Parable of the Sower). On the other hand, to philosophize is not to fill one’s head, but to cultivate one’s own soul so that it can give (just as it is said of good earth, that it *gives*). After all, it is a matter of an immanent operation. In this matter, the so-called “world of culture” is the opposite of authentic culture, because the latter is not exhausted in the accumulation of works of art and of worldly evenings, but in the unfolding of human nature, in the care of souls, in the concern that persons grow and bear fruit.

It is evident that the modern “world of culture” is placed exactly at the opposite end of this care and concern; it is an immense diversion, a flight from the hard work of cultivating oneself, which implies turning over the earth of our spirit, and pulling the bad weeds, eliminating the dead wood, pruning, thinning the epicormic branches, turning the small branches in the direction of better exposure, cutting the wood buds in the old tree unrelentingly in order to privilege the flower buds.

These considerations might appear unusual, not pertinent, incongruous, barely philosophical. On the contrary, nothing is more philosophical—if we believe Cicero—than going back to agriculture. Almost

all of the great Latin authors passed through it, Virgil certainly, but also Cato, Varro, Columella, Palladio, Pliny. They left us a great number of treatises *De Re rustica*. As though the *Res rustica* were an inevitable preliminary condition for the *Res publica*. Cato the Elder, in the preface to *De agricultura*, makes this significant observation: “When our ancestors wanted to praise a good citizen, they gave him the title of a good farmer or a good steward: these expressions were for them the ultimate horizon of praise.”

These considerations might appear to be strange, out of place, out of date, barely theological. In truth, nothing is more theological than *taking into consideration the lilies of the field*. Nothing is more theological than *meditating on the shoots that are cut off because they don't bear fruit, and those that are pruned that they may bear fruit*. (No one is spared using shears.) What we are talking about is connected to the first word, the first commandment, the first blessing, what Adam heard just after his creation: the commandment that precedes the ten commandments. It is connected to the word of Genesis 1:28, by which man's ear was opened: *Be fruitful*.

Strangely, the Hebrew gives to man and woman, as the first commandment, to fulfill a deed which concerns a tree. And not of just any tree. A fruit tree. The kind of tree that we would see growing in an orchard that demands pruning every year. Fructification is essentially an operation of nature, certainly, but an operation that also demands the care of cultivation. And we know the importance of this verb in the Gospel. It is the word of the Word, so to speak, the word of the One who is the way, the truth and the life, “fructification” gathering in some way these three terms, implying the path of the sap, the disclosure of the flowers and the gift of the juicy cluster of grapes. Jesus never stops reminding us that it is not enough to follow him or be bound to him: the disciple must also bear fruit. *It is the glory of my Father that you bear much fruit and become my disciples* (Jn 15:8). To speak about the glory of heaven, the Word uses the words of the earth. To speak about spiritual life, he returns to a material, vegetable life. It is as though our ascent could not happen without the fruit tree. As though there were wings only for the boorish.

Why? Why always the vine, the olive tree, the fig tree, the field of wheat in Christ's discourses? Couldn't an image besides that of a tree work? Isn't this privilege just circumstantial, referring to a past era? Couldn't we substitute *Be fruitful and multiply* with *Connect and download*? Or at least this obscure imperative—*Be fruitful*—with a transparent imperative, such as, for example: Fabricate: make, multiply articles and fill stores and subject everything to your extraordinary productive apparatus? After all, Jesus was a carpenter. He would have been able to use the vocabulary of an artisan, of construction, of fabrication. Why did he always prefer that of cultivation?

Because He knows that at the origin it is not written *Fabricate* but *Be fruitful, and multiply, and fill the earth and have dominion over it*. Try to put *fabricate* in the place of *be fruitful*, and the sense of this domination of the earth is completely turned upside down. Domination through fabrication, this domination which is the current form of domination, is not domination through fruitfulness. In fruitfulness one dominates the earth through a prior respect for the earth, since it is by virtue of an operation of the earth that this domination is expressed. In fabrication, at least in the kind which is not based on fruitfulness, that which doesn't retain the primacy of fruitfulness in its imagination, one dominates the earth without respect, because earthly matter is no longer perceived in its fecundity, but as simple matter, manipulable according to our whims and all the more exploited, exhausted, deconstructed, decomposed and rearranged, the more we are deafened to and flee from the demands of fruitfulness, of cultivating ourselves.

The crisis of the crisis is here. The unculture of the culture is here. We no longer hear words in the echo

of the first word. We have lost the imagination of the soil. We have lost the sense of this arboriculture, which must be the base of all human activities: because starting with the paradigm of arboriculture, we see that art consists in accompanying the development of a given natural form. Without that paradigm, or rather, substituting it with the paradigm of engineering, art no longer imitates, accompanies and prolongs nature. It breaks with it, dismantles and reconstructs it, accosts it and robs it in view of our Babelic projects, our Pharaonic plans, our machinations as enslaving as they are proud.

In a recent memoir, the academic Jean Clair shows that this change in paradigm, this loss of the agricultural reference to the farmer in favor of the technical one, is the biggest event of the twentieth century. “The real misery was discovered in the city by those first immigrants looking for work, in those closets where they found refuge—where they would bump up against the walls with furniture made of fake wood, reduced to size so that it could be carried through the doorway.....”

The misery is described here as a loss of meaning understood as the loss of the earth, a loss of proportion and loss of material. A loss which culminates in the “fake wood,” that is reconstituted wood, first laminate, then ply-wood, then particle board, then plastic with imitation wood grain, then, finally, the background of the electronic screen showing a forest or a beautiful landscape with trees and fields. The attribute, first of industrial society, then, even more, of the information society, is not simply to destroy nature, but to reconstruct it, to fabricate a pseudo-fruitfulness, to set aside “green spaces,” to invent transgenic essences and illusory wood, more adapted to the conditions of production and pollution.

The art of the farmer has already been absorbed by the technology of the engineer. The carpenter of yesterday, the kind that Jesus was, worked the wood in view of fruitfulness. He drew a piece of furniture out of wood as if he were drawing out a marvelous fruit, and the pieces of furniture retained the memory of the first commandment. Today wood-working is done with machine production and computerization in mind. The piece of furniture is not a marvelous fruit; it is the result of calculation. In the best of cases it is a merely functional product. In the worst, it is a cog in a machine. In any case it is never that which is given to us to inhabit the world in its texture, in its generous density.

The Word became a carpenter. Here is a point on which we don't insist enough. The Word became a carpenter. He didn't become a philosopher or a lawyer. He didn't even become a potter or a stone-cutter. Why, though, wasn't he a vine-dresser, or at least a shepherd, or a fisherman, as were some of the apostles? Why a carpenter? Was it not perhaps because of the irony of the cross: to be nailed on that wood that he had just nailed together, to be worked by that wood which he had just worked? It seems above all that it is because, in this case, it is a matter of an in-between trade, a crucial trade, at the crossroads between arboriculture and craft.

The work of the carpenter is placed at this hinge: between the forest and the house, the tree trunk and the roof. This is because he works on material *par excellence*, the material that carries in itself the memory of fruitfulness. The word *bois*, in French, indicates at once the living trees (the *woods*) and the material taken from those trees (*wood*). In Greek, “matter” is *hylè*, which also refers to wood. In Latin *materia* still means wood as material, but in its power to generate layers, to make small branches sprout: in its maternal potency, since it is the same root which is heard in *mater*—mother, and in *materia*—matter. Through this maternity of the woody material, the carpenter, the joiner, the cabinet-maker are invited to be fathers and not simply experts, to proceed in the manner of generation, not merely construction.

The move from *materia* as wood to *materia* as material in general allows us to see that, for the ancients, wood is the material *par excellence*, the substrate, the material cause. This material is not the material

of the moderns, formless, malleable and good for anything, a mere effect without its own causality. It has something of its own to say. It retains the memory of the first commandment.

.....

Modern matter bends to all of our whims; but its submission is also our defeat because it deprives us of contact with a substantial world. What counts now is the “molecular institution.” Living forms have disappeared; there is only inert matter, an atomized, mechanized space, molecules or elements which are there to be recombined, and which undoubtedly appeal to our creativity; but suddenly our creativity gets flabby, subsides, and becomes itself insubstantial, being deprived of the variegated forms of nature; our imagination becomes mute. When one pretends to be the absolute creator, one is no longer able to have an imagination. When one loses the spirit of matter, one also loses the spirit of the spirit. Now we can see in what way a great part of the evils which characterize our time come from this loss of the spirit of matter. I refer specifically to the evils which characterize our age. Rediscovering the spirit of matter would not liberate us from every evil. The ancient evils would still be there: cruelty, hatred, contempt..... Rediscovering the spirit of matter would only liberate us from that very contemporary evil which doesn't need cruelty or malice to spread itself, which spreads even through ethics, proliferates thanks to morality, and advances its devastating effects through the demand for justice. Because here the problem is not first of all a moral one, but a physical one: it corresponds to our vision of nature, of matter, of that fact that precedes our projects and choices. If our vision is false, great moral zeal will only carry us toward catastrophe. Now the vision that dominates today in the face of the fact of nature is not that of a *donum* but of *data*. Nature is reduced to elements which we can try to reconstruct on the basis of our desires. It is the kingdom of the “Meccano” kit. We don't just put the cart before the horse, we put the computer before the cart, and binary electronics before the computer. Matter is broken down into atoms, the living into genes, intelligence into neurons, society into individuals, who for their part are broken down into a sum of functions whose communication is broken down into bytes. Starting here, morality is broken down into negotiable values. And we are invited to remake everything better, to make a new, better man, no longer through fruitfulness but through fabrication, no longer as the fruit of one's loins but as a product of synthesis; because, from the moment that our vision of the elements win over natural form, we can no longer generate anything other than the synthetic, beginning with a re-assemblage of those same elements.

This is as much the principle of liberalism as of totalitarianism: in each, man does not appear as a child in a given community, but as an individual, an element in a constructed community, either by theory or by contract, through the State or the Market. This is the principle of *gender theory* which is not about making the sexual fact fruitful, since sex in this case has become only material to be reoriented or reestablished according to the norms or tendencies of the moment. This is the principle of the economic crisis where the scope is the unlimited growth of the GDP, of production, and not growth in terms of the maturity and fruitfulness of persons. So much is this the case that the very word “economy” has lost its vegetative meaning, both sexual and agrarian, the meaning that recalled the ancients to the government of the family (*oikos*) and of the management of the agricultural environment tied to it. This is the principle of the culture of death, the unculture which is hidden behind the multiplication of cultural products, founded on the model of engineering and not on that of agriculture. This is the principle of the spiritual crisis where one is at once lost in an atomistic materialism, and in an ethereal spiritualism, because having lost the spirit of material we no longer know how to approach the History of Salvation and the Mystery of the Incarnation.

At the heart of it, my thesis is very simple: in order to get away from a wooden language, we must recover the language of wood, the word of the vineyard, the grammar of fruitfulness. In fact, if we don't

recover the meaning of material, if we no longer reintegrate the imagination of the stock, the vine-shoots, the cluster and the press, how can we feel its concrete resonance in the words of Christ in St. John (Jn 15:1): *Ego sum vitis vera et Pater meus agricola est—I am the true vine and my Father is the vine-dresser?*

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