The Fourth Way of technology and change

Dennis Shirley

Abstract   Recent social policy reforms have sought to overcome the limitations of "First Way" strategies emphasizing the welfare state and "Second Way" approaches advocating markets. Scholars and policymakers instead have begun to explore optimal synthesis of the public and private sector in a new "Third Way" of leadership and change. According to one line of interpretation advanced by Andy Hargreaves and Dennis Shirley, however, the Third Way as developed in education has ushered in a new orthodoxy of testing, accountability, and data-driven decision making. This new orthodoxy is said to distract educators from their true moral purposes. Hence, Hargreaves and Shirley have called for a new "Fourth Way" of change that draws upon international best practices in education. In this interpretive essay for a *Festschrift* issue of the *Journal of Educational Change* celebrating Andy Hargreaves' 60th birthday, Dennis Shirley revisits Fourth Way change architecture to inquire after the appropriate role of new technologies in classrooms and schools. He retrieves the concept of mindful teaching and learning from the Fourth Way change model and illustrates how it can be used as a lens to adjudicate various interpretations of the appropriate role of new technologies in schools.

Keywords   Educational change · Fourth Way · Educational technology · Mindful teaching and learning

The manuscripts in this *Festschrift* provide expansions on and critiques of Andy Hargreaves' scholarship that point educational researchers in many new directions. These span from addressing the complexities of parent involvement in contexts of high-stakes testing to engaging the emotional geographies of change and from

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data-driven decision making to students as partners in school improvement. These promising contributions celebrate Andy Hargreaves' 60th birthday and the continuation of the *Journal of Educational Change* under the new leadership of Professor Amanda Datnow at the University of California, San Diego.

Yet if new possibilities are identified, old and apparently intractable problems have resurfaced that provide a feedback loop to Andy's scholarship. Andy's recent research (2003, 2010) shows that in many ways, educators' professionalism today is more thwarted than ever. High-stakes testing, intended to improve learning, turns out to narrow and constrict it; new data programs that were designed to provide us with evidence of student achievement become ends in themselves rather than tools for improving learning; even professional learning communities, seen for years as the most hopeful sign of pooling and deploying professional knowledge, turn into performance training sects rather than settings that encourage deep and probing examination of the interstices of teaching and learning.

These research findings suggest the need for greater awareness of the unintended consequences of under-conceptualized and poorly implemented change strategies that have become prevalent in recent years. In many ways, we still have not learned the central lesson of Max Weber's (1920/1958) sociology of bureaucracy best expressed in *The Protestant Ethic and the Spirit of Capitalism*. Weber's central insight was that many of the initially benevolent attributes of modern rationalism—a confidence in markets, self-abnegation, and law—could, unless checked by countervailing attentiveness to our needs for identity, relatedness, and community—turn into an "iron cage" (p. 181) with a new ensemble of oppressive relationships all of its own making.

This sensitivity to the actual ramifications of bureaucracy in its various cultural permutations on the lives of real, concrete individuals saturates Andy's studies in educational change and gives his writing a persistently Weberian character. Andy's scholarship reveals again and again that educators find themselves suffering from "contrived collegiality" (Hargreaves 1994, p. 186) which forces them to abandon their own cravings for making sense of their teaching with programmatic compliance to dictated lines of reporting as prescribed by school system leaders. Likewise, teachers seek settings in which they can explore the moral complexities and demands placed upon them through their interactions with the young and instead find themselves socialized into "performance training sects" (Hargreaves 2003, p. 182) that narrow their aspirations to measurable test score results. The costs of these professional deformations for students, teachers, and communities are enormous, not so much through brazen cruelty as the daily experience of eroded potential and compromise.

These problems are exacerbated through many years of enculturation into a profession with a tenuous technical knowledge base and pervasive insecurity. In our new situation of ever-increasing pressure for academic achievement—now exacerbated by endemic economic insecurity in the wake of the credit crisis of 2008—what possibilities remain for educators to move beyond the "unholy trinity" (MacDonald and Shirley 2009, p. 6) of presentism, privatism, and conservatism that Dan Lortie (1975) described as stultifying teachers' workplace cultures? What potential is there for educators—even in an age of increased data-driven decision

making and growing surveillance—to recover the full breadth and grandeur of their profession? Or must we make our peace with cultures of instant compliance with whatever the latest policy mandate requires and quick adaptations of our professional practices to the latest set of curriculum frameworks that will be assessed on the most recent upgrade of the state or province's standardized test? Is alienated labor (Marx 1844/1968) and its educational correlate, "alienated teaching" (MacDonald and Shirley 2009, p. 3), an indelible part of education in our new age of fast capitalism (Sennett 2006)?

In our book entitled *The Fourth Way: The Inspiring Future for Educational Change* (Hargreaves and Shirley 2009a), Andy and I endeavored to be frank, perhaps brutally so, about the challenges facing contemporary education. We accept research findings (Achinstein and Ogawa 2006; Booher-Jennings 2005; McNeil 2000) indicating that teachers are now struggling in contexts of "constrained professionalism" (Wills and Sandholtz 2009, p. 1065). While we applaud recent efforts to give education a stronger evidentiary basis, we worry that the pendulum has swung too far towards pervasive testing such that educators today are being "data-driven to distraction" (Shirley and Hargreaves 2006).

To better understand and then correct these tendencies, we provided a new periodization of recent "Ways" of educational change basing our argument on the framework of "Third Way" reforms advanced in their most compelling form in the writing of Anthony Giddens (1999, 2000, 2001), former director of the London School of Economics. Using Giddens' analyses as our point of departure, we drew upon what we described as four horizons of hope—Finland, the Raising Achievement Transforming Learning network in the United Kingdom, community organizing in the United States, and the London borough of Tower Hamlets—to propose a new architecture of educational change. Here the point was not so much to directly transplant Finnish models of education or new forms of community organizing from one context to another, but to identify the key components that have made these approaches so successful and to inquire after their dissemination into other jurisdictions that are open to learning about successful practices from around the globe.

The Fourth Way has been well received by professional educators, and translations are proceeding in many languages. Reviewing our arguments in *The Fourth Way* less than 2 years later, however, one notes a striking omission: In spite of the far-reaching transformation of schools and society as a consequence of technological innovation, the discussion of technology in our argument is limited. There is some consideration of technocracy as a "path of distraction" that diverts educators from their true moral purposes, but this section of *The Fourth Way* (Hargreaves and Shirley 2009a, pp. 21–46) is more focused on data usage by state departments or provincial ministries of education than on technology in the sense of personal computers or handheld devices. There is no real analysis of the role of technology in informing different ways of change and little discussion of either emancipatory or distorting dimensions of technology in the future of education.

This omission calls for rectification. In this article, I will first revisit the overall argument of *The Fourth Way* in a condensed form for those readers who are unfamiliar with the framework. This will then lead to a discussion of the role of

technology in each Way with particular interest directed toward the manner in which educators have either embraced or resisted technological innovations. Finally, I will turn to our current context, drawing upon the "seven synergies of mindful teaching" (MacDonald and Shirley 2009, p. 60) to explore ways in which Fourth Way change architecture can be rendered both more complex and more generative with regard to the revolution in information and technology that is sweeping the world.

The contention shall be that technology has enormous potential for humanizing and uplifting education in the future, but we must be alert to its addictive qualities, its enhancement of immediate gratification over long-term fulfillment, and the erosion of human relationships that it can entail. This middle path between the hyperbole of uncritical advocates for technology (Gee 2007; Prensky 2010; Richardson 2010) and those who focus almost exclusively on its dangers and problems (Aboujaoude 2011; Carr 2010; Turkle 2011) make no claims on originality. Its assertion here is made in regard to our polarizing context in which educators are faced with yet another push–pull pendulum swing between traditional forms of teaching and learning and new possibilities that are sometimes pushed with only a thinly-veiled profit motive in mind. Only if we are mindful about our values and skillful in regard to navigating the practical challenges that lie ahead can we enter into a promising and humanistic new Fourth Way of change and leadership where technology does not drive our values but rather enables their manifestation.

Four Ways of educational change

If there is an omission in *The Fourth Way* in regard to technology, it is an honestly acquired one, for technology played little role in the arguments for a Third Way of change initially supported by Prime Minister Tony Blair in the United Kingdom and Gerhard Schröder in Germany in a joint white paper (1999). The initial contention of these political leaders was that a new opening for centrist politics—what Schröder called "*die neue Mitte*" or "the new middle"—go beyond the old, 1960s version of the welfare state and the neoliberal policies inaugurated by US President Ronald Reagan and UK Prime Minister Margaret Thatcher in the 1980s. Third Way thinkers and political leaders wanted to find a way to fuse the strengths of the welfare state with the dynamism and innovative qualities of markets while mitigating the problems of state bureaucracies and capitalist profiteering.

The Third Way as a new social policy direction created a great deal of interest and debate at the end of the 1990s but receded from public view in the first years of the new century. Yet many of the arguments of Third Way thinkers continued to make a great deal of intuitive sense. Old oppositions between state-sponsored social welfare systems and capitalist accumulation have evolved into an almost infinite variety of hybrids as governments and social entrepreneurs tinker with various combinations of private and public solutions to social problems (Senge et al. 2008; Thaler and Sunstein 2008). Furthermore, the evolution of capital into new forms of social networks that cut across state, civil society, and the economy suggest the rise of new and more flexible forms of social organization with major ramifications for

the future of democratic participation, social movements, and public education (Castells 2001; Castells and Cardoso 2006).

In regard to education in particular, Andy and I chose to use much of his data from the *Change over Time?* study he conducted with Ivor Goodson (2006), to investigate whether one could indeed identify three distinct Ways of educational change in recent decades. This research was supplemented by my own field research (1997, 2002) in the new area of community organizing for educational change conducted in the US for over 20 years. While there are many unique aspects of change in different national contexts, we contend that if one examines Anglo-American contexts in the 1960s, as compared to today, educators in many different jurisdictions had considerable latitude in shaping their practices. There were no state or provincewide standardized tests, no specific mechanisms for promoting lateral learning among educators to uplift the profession, and the public enjoyed a passive trust towards schools. This First Way allowed great freedom for educators.

This was, however, a *negative freedom* to be left alone rather than a *positive freedom* to participate in a professional community (Berlin 1969). In contests between autonomy versus collective responsibility, autonomy always won out in the First Way. So, educators had enormous latitude to act as they wished but few opportunities to polish their craft in the company of their colleagues. Students knew that wide variations in grading practices left them at the mercy of their teachers' caprice. Other than report cards, publics had no idea how well their children were learning—nor did educators have any real evidence to guide them regarding how their own assessment practices compared to those of their colleagues.

The freedom of the First Way, then, was insubstantial in many regards. Professionalism was construed in terms of individual choice for teachers—not in terms of research-based proof of best practices for students. Evidence to inform instructional decisions was scarce. Professional learning opportunities were decoupled from real students in real schools and consisted largely of one-off, "drive-by" professional development workshops. Principals were managers who kept order and provided for efficiency. School leaders did not focus on improving teaching and learning, nor did teachers expect them to.

In the Second Way that began in the 1980s, this wide latitude of the First Way was brought to a close. In reports such as *A Nation at Risk: The Imperative for Educational Reform* (National Commission on Excellence in Education 1983) in the US, a new change strategy argued for specific hours of instruction in given topics, greater academic rigor, and clarity about academic standards that would be accepted by all. Similar reforms were introduced in the Canadian province of Ontario, and in 1988, England inaugurated a new national curriculum as part of its own drive for more centralized control and direction.

Hand in hand with these reforms, and in some tension with them, arose the popularity of charter schools in the US and academies in the UK. If the state couldn't provide consistent educational quality, the argument went, one should see if markets could. Standards and tests would indicate whether new private sector initiatives could outcompete older public school organizations.

The *Nation at Risk* report was popular in the US, and Republicans learned that they could win votes and confidence by abandoning their earlier rejection of a

federal role in education and by using the bully pulpit of the presidency on matters related to schools and their improvement. For educators, however, the punitive aspects of Second Way reforms rapidly became apparent. Educators resented being blamed for low levels of student achievement, and they pushed back against outsiders who sought to change the profession. Teachers and school leaders saw the innovative potential of charters and academies not so much as a new opportunity but rather as a subterfuge to end teacher tenure and to erode traditional public education. Cohn and Kottkamp's (1993) reinvestigation of Lortie's (1975) ensemble of privatism, conservatism, and presentism found that educators were even more constrained and demoralized professionally than they had been at the time of Lortie's research. The Second Way, it seemed, replaced professional licentiousness with top-down control. Yet surely there was a better approach than that offered either by the First or Second Ways.

One potential answer was to find new ways to energize the profession itself by attacking the isolation of teachers from one another that had been a hallmark of teachers' lives for decades. New Third Way reforms emerged that emphasized the "lateral learning" of educators—side to side as it were rather than top-down or bottom-up through student voice or parent involvement—and became a favored way of reenergizing the profession. In the Raising Achievement Transforming Learning (RATL) network studied by Andy and me (2007) in the UK in 2005 and 2006, this lateral learning was especially evident. RATL leaders created a fascinating change architecture that networked headteachers together, provided data-rich regional and national conferences for them, and organized mentor teachers to work across school lines and those of local education agencies. Educators were provided with a menu of short, medium, and long-term change strategies to select from to drive their innovations forward. Inspirational speakers, the precise targeting of areas of low achievement as revealed on tests, and strategic linking of schools together that faced similar challenges with similar populations were favored RATL strategies.

RATL had extraordinary strengths. Hard-nosed leaders, rich data bases, and an overall confident attitude about the potential of schools learning from schools resulted in raising the achievement results of over 200 networked schools at double the national average, with 100 schools showing lower gains or none at all in the same 2 year time period. Since one had to be in a school with low value added results to be invited into the RATL network, and since improving results in such schools often turns out to be much harder than anyone imagines, RATL-affiliated gains caught the attention of upper-level system leaders and led to the dissemination of RATL-like practices in local education agencies that had adopted a "wait and see" attitude at the outset. In an intriguing formulation of a research question, we actually were first invited to learn how RATL had achieved its success with the hope that practical lessons might be derived that could be adapted to other settings.

RATL headteachers were enthusiastic about the benefits of network participation. Still, a major problem surfaced in conducting our interviews and focus group discussions. Virtually all of the headteachers we interviewed emphasized short-term strategies to boost achievement to the neglect of medium or long-term changes. The headteachers described the short-term reforms as "gimmicky and great" precisely

because they were so easy and did not challenge traditional arrangements. Many strategies were add-ons—paying teachers for tutoring students after school or on weekends, for example—that left untouched the traditional culture of schooling during the school day. Others were more opportunistic and entailed providing students with bananas and water (or even soda and sweets) before tests to wake them up and to hydrate the brain.

Our research team endeavored to be careful not to criticize RATL leaders or headteachers for their preference for these short-term strategies over medium or long-term approaches. Policy contexts, not their freely chosen leadership, dictated their responses. The only headteachers who weren't enthusiastic about RATL tended to be beginners in the role who declined to take advantage of the network as a resource—and who consequently saw few academic gains. Headteachers praised RATL for professionalizing the opportunities available when schools begin learning from other schools in deliberate and systemic ways.

Yet scholars have a responsibility not just to celebrate change, but also to observe problems in change and to suggest alternatives. The research on RATL was central to our thinking in this regard. We began to see how even the most promising Third Way change strategies came with costs as well as benefits. We regretted the loss of a professional space for educators to ask after their deepest aspirations for their students—including those aspirations that might not be easily measured on traditional assessments. We missed hearing discussions about social justice understood as something that went beyond value added measurements. While diverse populations were celebrated nominally, we saw little impact of changes in the curriculum or forms of parent engagement that stretched educators' under-standings beyond test scores. The marginalization of long-term change strategies that might entail an energetic restructuring of the curriculum or a deep transformation of school and community relations was especially troubling for us.

We recognized the enormous step forward that RATL made in creating one of the best models of schools learning from schools that we have observed in our professional careers. This was a breakthrough that is being spread to other schools through other reform strategies in the UK and abroad. But at the same time, we also knew that education could be more than this. We wanted to bring the heart and soul of teaching and learning back into the enterprise, even if this entailed the incorporation of those dimensions that are most difficult to measure. So we sought to articulate a new change architecture—the Fourth Way—that would build upon the strengths of each of the three previous Ways of change while avoiding their weaknesses.

The Fourth Way begins with "an inspiring and inclusive vision" (Hargreaves and Shirley 2009a, p. 73) for education that should be carefully adapted for any particular context. In one jurisdiction, educators might choose to focus on gender equity, in a second on environmental sustainability, and in a third on community organizing. For a school or district ravaged by the recession, the skills of business leaders and trade unionists collaborating together might be needed, while in a community invaded by extractive industries, study and advocacy based upon legal constraints on industry might be most needed. The process of establishing the vision here matters just as much as the vision itself. There is a genuine dedication to

participatory democracy, cultural diversity, and the importance of human freedom in enabling communities to set their own goals at the heart of the Fourth Way.

Drawing upon many years of research in education and community organizing, *The Fourth Way* framework is designed to advance a humanistic path of educational change that requires space for introspection and meditation and warns against glittering entertainments that can erode the very unique challenges that we all face as human beings. Who are we? What values do we enact? Is there a discrepancy between the values that we claim we hold and how we actually treat others in our everyday lives?

These are enduring existential questions that cut across societies and historical epochs. They cannot be answered quickly without evading perennial challenges that face all of us; they define the human condition. To this degree, they are ontological—they are of the nature of being. Even if they cannot be resolved definitively, they can and must be explored, when possible through mindful forms of teaching and learning (Langer 1989, 1997) that lead us deeply into the many paradoxes and complexities of our age.

Four Ways of technology and change

But how do the Four Ways of change described above relate to the enormous changes in technology that have swept through our lives in the past decades? Critics (Jenkins et al. 2006; Trilling and Fadel 2009) are largely accurate when they claim that educators have been resistant to new technologies in the public schools. This resistance appears to be a general phenomenon that must entail some deeper meaning about how educators experience their work. It seems that educators were skeptical about the benefits of television and film in the First Way, objected to the infusion of desktop computers and word processing in the Second Way, and especially have questioned advocacy for diverse forms of computer assisted instruction in the Third Way. While there have been exceptions, boosters of technology in schools are correct that educators have been cautious in some cases and almost viscerally resistant in others.

Why is this? As always, proposed new reforms—whether they are related to site-based decision making, multiculturalism, or inquiry-based approaches over direct instruction—must pass through the powerful mediating fulcrum of teachers' workplace cultures. Teachers acquire these cultures through many years of exposure and enculturation. First, there are teachers' own experiences as pupils who observe their teachers from the perspective of those receiving instruction and attempting to master content knowledge. Second, there is another level of enculturation as teacher candidates in colleges and universities learn about dimensions of the profession such as lesson planning, classroom management, and assessment practices. Third, there is the actual socialization into the workplace setting of the classroom and school which is often determinative in regard to shaping teachers' prosaic daily experiences.

This triple ensemble of enculturation—as students, as teacher candidates, and as practicing teachers—powerfully shapes how teachers develop their professional

norms and ethics; technical skills related to planning, introducing, guiding, and assessing instruction; and soft skills entailed in encouraging struggling learners. They lead teachers to accept an egalitarian culture that promotes individualism and non-interference in each other's classrooms. They create a wary attitude toward outsiders who promulgate innovations without due consideration given to the additional work they may entail for teachers. This is especially the case when innovators give little evidence of understanding the skills and demands that teachers must martial to manage the bustle and intensity of instructing large groups of young people day in and day out over many years.

How does this commentary on teachers' workplace cultures relate to technology and to the First Way of leadership and change? In his insightful study entitled *Teachers and Machines: The Classroom Use of Technology Since 1920*, Larry Cuban (1986) found that much of teachers' reluctance to endorse new technologies in the 1960s and 1970s had to do with their core understanding of teaching as a vocation. Even when granted ease of access to television and movies, (at least potentially) reduced work loads, and the popularity of media usage by the young, teachers generally avoided new technologies. The reason, Cuban found, is "because teachers believe that interpersonal relations are essential in student learning, the use of technologies that either displace, interrupt, or minimize that relationship between teacher and child is viewed in a negative light" (Cuban 1986, pp. 60–61). Furthermore, given the situational constraints that teachers faced in terms of their busy everyday work lives, they found that teachers were just as capable of conveying key information to students through traditional instructional practices that were more adapted to their students than utilizing more generic approaches such as television shows or movie clips.

Hence, even in the First Way when educational technologies were downright primitive by today's standards, educators tended to respond cautiously to new technologies. When they did adapt new technologies, they often based that adaptation on concerns extraneous to the quality of the media. Hence, Cuban found that teachers tended to integrate more technology into their instruction in the afternoon than in the morning when they were tired and both they and students welcomed a break from the rigors of teaching and learning. Primary school teachers used more television and film in their classes than secondary school teachers, not so much because the level of academic press is less in primary schools than in secondary schools, but because engaging the children in watching media gave them a much appreciated pause from the demands of managing large groups of children. These are, of course, custodial considerations happily seized upon by educators uncertain of their content knowledge or simply tired from being fully present for their students hour after hour rather than providing purposeful instruction geared to helping students realize their full academic potential.

Television in the 1960s and 1970s lacked the flexibility of contemporary technologies which allow young people to interact creatively with film by easily creating their own pieces cutting and pasting segments of films into powerpoint presentations or on Facebook pages. The media had potential, but the users of it— the students—were still *consumers*, not *prosumers* in the sense in which contemporary technology allows users to creatively manipulate media for their

own purposes (Tapscott 2009). Most importantly, teachers controlled the technology whether they were slideshows, recordings, movies, or television shows.

Educators' reluctance to embrace new technologies in the First Way was rooted in the complexities of classroom instruction as experienced in their daily interactions with pupils. Yet outside of the classroom, rapidly escalating techno-logical innovations continued to change society. In the United States, the *Nation at Risk* report was the first federal document in the history of the nation that explicitly called for all American high school students to study a half-year of "computer science" (National Commission on Excellence in Education 1983, p. 404). This recommendation was largely ignored in the ensuing battles of curriculum reform in history, English, science, and math (Ravitch 2000). Educators might have liked to integrate more computers into their instruction, but with funding levels uneven, the relationship to traditional academic curriculum uncertain, and the traumatic experiences entailed in painstakingly prepared classes in which technology just didn't work as it should when needed most, many educators held on to their traditional approaches even as the technological world changed around them.

Aside from *A Nation at Risk's* (National Commission on Excellence in Education 1983) call for computer literacy, Second Way reforms resulted in a narrowing of the curriculum. This occurred right at the time when technology was beginning to work its way into the homes of millions of students. In primary schools, Second Way emphases on literacy and numeracy meant a diminution of studies in other areas such as science and social studies, thus setting back what might otherwise have propelled computers more rapidly into schools and the classroom (Pedulla et al. 2003).

When computers did arrive into schools, districts rarely had professional development in place to assist teachers in making the most out of the new opportunities they presented. Those teachers who were willing to experiment with technology learned that they always needed to have a strong back-up plan in place in the event that a software program might freeze unexpectedly or a sound system might fail to be activated. They also learned that they needed to monitor students' computer usage carefully to prevent students' engagement in low-level activities that provided them with the immediate gratification of a pleasing visual image but did little to enhance their long-term academic development. As a consequence of the many challenges entailed in working with new technologies, teachers complained that their potential for improving learning was overstated, and they responded not so much by open protest as through passive resistance (Cuban 2001).

By the beginning of the Third Way in the middle to late 1990s, technology began its stunning and truly revolutionary transformation of human relationships. Cell phones multiplied not by the millions, but by the billions, as did their variety and complexity. Email systems sprang up altering work practices, eroding the line separating the public life of work and the private life of home, and speeding up communication across schools and continents. Text messaging, Twitter, and Facebook postings now have already relegated email itself into a sign of generational aging less than two decades after its popularization. Powerful new search engines like Google and new online resources like Wikipedia and YouTube

sprang up out of nowhere and created instant access to resources, fomenting a spectacular information breakthrough in human history.

The magnitude of these transformations are still scarcely understood, it seems, as well as their ramifications. On the one hand, the infusion of computers into schools, just like the incorporation of televisions and films into classrooms decades earlier, has resulted in disappointing academic outcomes (Lowther et al. 2007; Shapley et al. 2009; Silvernail and Gritter 2007). US states like Michigan, Maine, and Texas that instituted one-to-one laptop programs for students found that they received little in return for their investment with scores rising in some subjects and schools, no differences in others, and declines in others. The powerful mediating role of the school district, site-level leader, or individual classroom teacher seemed to matter more in the final analysis than the mere infusion of new technological tools.

Beyond these preliminary research findings, debates have raged about the broader import of new technologies in society. Some (Gee 2007; McGonigal 2011) argue that the new technologies, such as video games, have much to teach us about learning and literacy and should become templates not just for fixing schools to better engage learners but for addressing all kinds of social maladies, from the prosaic daily tasks of housecleaning to the enormous global challenge of climate change. Others (Carr 2010; Jackson 2009) contend that new technologies have made us so distracted that we not only put our professions but also our very lives at risk through our inattentiveness to those things that should matter most. Still others (Aboujaoude 2011; Boellstorff 2008; Mayer-Schönberger 2009; Turkle 2011) are beginning to grapple not just with the surface ephemera of new technologies but with what they really mean for human identity and social relationships. Finally, brain scientists (Small and Vorgan 2008) are alerting us to the manner in which computer usage is altering our synaptic connections and neural networks, strengthening our skills in some areas (hand-eye coordination in video gaming, for example) while eroding others (such as cultivating a sense of compassion which occurs through learning to read the subtleties of tone of voice, eye contact, and gestures).

Yet even the fiercest critics of new technologies recognize the difficulty of going back to an age before the Internet and cell phones. The access to exact information is too convenient, the security in being able always to contact friends and family members too reassuring, and the excitement about hearing from a long-lost friend or receiving an invitation to a social engagement too enjoyable to return to the past. The challenge is rather to find ways to honestly acknowledge the distortions of the new culture of technology use and to develop correctives so that our quest for knowledge and our longing to reach our full potential can be actualized.

The Third Way, in retrospect, was very much driven by both the euphoria of the dot.com boom of the 1990s and the recession and then the credit crunch of the first decade of the new millennium. Like much of the new technology, the Third Way was characterized by an intoxication with speed and presentism, or short-term thinking (Hargreaves and Shirley 2009b). The invitation to play a role in shaping "participatory culture" (Jenkins et al. 2006), so promising in its democratic intentions, turned out to have a darker side as the very openness of the web guaranteed that the Holocaust denier and the apologist for slavery would have just

as much claim to expertise as the most conscientious and public-spirited historian (Solove 2007). This was an autocracy not so much of a central governmental authority as of mob psychology, in which the ugliest aspects of human nature could manifest themselves, as unnamed bloggers could drive a depressed young man to commit suicide in front of a webcam for their viewing pleasure or find themselves reveling in filmed clips of animals being tortured to death on YouTube (Aboujaoude 2011).

The intensity of these emotional experiences—freely available to everyone of any age at any time with access to the Internet—promoted a very new and unusual form of the collective effervescence first described by Emile Durkheim (1912/1995) in *The Elementary Forms of Religious Life*. For while Durkheim described individuals who overcome their separation through dance and ritual in a real shared geographical space, the new experience in a "virtual" space requires no face-to-face interactions. One neither knows, nor wishes to know, the others who participate in the ritual.

Yet embedded within the new technologies, there also lay emancipatory possibilities, not just in terms of accessing information more quickly, but also in regard to some of our most pressing planetary problems. World Without Oil (WWO), for example, funded by the Corporation for Public Broadcasting, is an alternate reality game that requires players to imagine ways of changing deeply entrenched habits of oil consumption to promote greater environmental sustainability. To participate, players have to experiment with possible solutions large and small, adapt ecosystems thinking to understand the relationships between interconnected parts of a whole system, and learn to take the long view rather than thinking only in the short term (McGonigal 2011).[1] Players have reported strategies to adapt to a world without oil that include traveling less, cultivating deeper friendships with neighbors in one's immediate community, plans for building environmentally sustainable homes, and even adaptive strategies for parenting in a world without oil. Gamers further report that the impact of playing the game is immediate in raising their awareness of their consumption of oil and making lifestyle choices to reduce their environmental footprints on the planet.

Given the range of technological possibilities opened up in recent years, how can educators adjudicate which approaches to take to its integration (or parsing) in the years ahead? Educators need to draw upon their philosophies of education, new research findings, and their accumulated professional repertoires to mediate new technologies, just as they would any other innovation entering into the lives of schools. To do so requires educators to take the time to work out their core values in communities of inquiry and practice that are open to novelty and debate, encourage respect for dissidents, and promote lifelong learning that is not just targeted and measurable but also ambiguous and unsettling. With such a philosophical compass to investigate and filter emerging social trends, educators can both consolidate professional convictions while supporting purposeful growth through the assimilation of new forms of information.

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[1] Information on World Without Oil can be found on their website at http://worldwithoutoil.org/default.aspx.

One such mediating construct available to educators is the concept of *mindful teaching* as set forth in my recent research with Boston Public School teacher leader Elizabeth MacDonald (MacDonald and Shirley 2006, 2009). This research began with a case study of *alienated teaching*, defined as

> A kind of teaching that teachers perform when they feel that they *must* comply with external conditions that they have not chosen and from which they inwardly dissent because they feel that the new reforms do not serve their children well. (MacDonald and Shirley 2009, p. 2)

Through participatory action research of over 3 years with urban teachers, we have collectively endeavored to articulate a countervailing set of principles and practices which we have identified as "seven synergies" of mindful teaching (MacDonald and Shirley 2009, p. 60).

In the remainder of this manuscript, I will show how those seven synergies provide a compass that educators can use both to appropriate the positive aspects of new technologies and to deflect their negative facets. In many ways, the seven synergies bear affinities to Wolfgang Klafki's (1958/2000, 1994) questions of didactic analysis that he argued all educators must address in their lesson planning. Klafki wanted educators to ask what horizons a given curriculum would open to children's curiosity and imagination, and he demanded that educators ask not just what a curriculum meant in terms of children's future occupational prospects but also what the curriculum could mean for children today. While now is not the time for an in-depth comparison of the seven synergies of mindful teaching with Klafki's didactic analysis, one should note that both frameworks place ethics explicitly at the center of teaching as a vocation.

Given this ethical lens, how might the seven synergies help us to adjudicate the proper use of technology that could move beyond the problematic dimensions that have become evident in the first three Ways of educational change? Is it possible to imagine that we can move beyond the stop-start, push–pull pressures of outside interest groups and reluctant educators? Can we temper the hyperbole of technology advocates and move beyond the hostility of those who have become close-minded to the potential of technology? Let us investigate, and in the process, see if we can imagine a future in which technology use is anchored in, and contributes to rich and mutually respectful human relationships.

First Synergy: Open-mindedness. In almost no other facet of contemporary society have generational divides become so palpably manifest as in the use of technology (Rosen 2011). Baby boomers born between 1946 and 1964 and members of Generation X born between 1965 and 1979 appreciate new technologies but tend to use them instrumentally rather than as ends in themselves. For subsequent generations—such as Generation Y, born in the remaining years of the 20th century, and the iGeneration, born in the new millennium—technology access and use is easy and omnipresent.

It has become a truism to refer to Generation Y and the iGeneration as "digital natives" (Palfrey and Gasser 2008) who have learned how to access, manipulate, and produce their own content in new technologies. Enormous numbers of young people, not only in advanced but also in emerging economies, have not only

consumed material they have accessed on the web through iTunes or Facebook, but they have also produced their own web-based materials through mashups, the creation and embellishment of avatars, and participation in multi-user shared habitats (Ito 2010; Montgomery 2007). Teenagers in the US are now sending more than 3,000 text messages a month, and depending on the number of their friends, can easily be receiving double that number in return (Nielsen Company 2010). They have developed their own skillful deployment of emoticons such as 🙂 and 🙁 and abbreviations such as "cu" for "see you." They abandon older providers such as MySpace when failing to meet their needs and endorse Facebook because of its ease of use and adaptability.

There are so many opportunities for play and creativity in new technology forums that older forms of curriculum and instruction can seem downright cruel in comparison. If one makes an error on a computer game or setting up photographs on a Facebook page, for example, one usually can correct it quickly and then move on to another activity; this is quite different than on a standardized test where the results are fixed in space and time. Classroom interactions can be excruciating for children who stutter, are autistic, or simply insecure; online gamers can pause as long as they like with other users expecting breaks in time as part of online conversations and interactions. For children who are talented in the layout of visual designs but clumsy with words, opportunities to show what they can do when adding maps to history projects or artwork to an English essay can provide welcome relief and the opportunity to showcase their strengths rather than reluctantly reveal their weaknesses.

Second Synergy: Caring and Loving. If the Fourth Way is to enact mindful teaching and learning (MacDonald and Shirley 2009) that recognizes not just the rights of dominant groups but also the needs of diverse learners and individuals, truly exquisite attentiveness to the selection of new technological tools—and their ramifications for young people—must proceed with full recognition of the gravity of these decisions. *All* educators—including those who are most enthusiastic about technology and those who are most allergic—bear a common responsibility in failing to communicate to young people the indelible digital footprint that they leave behind when they neglect to apply strict privacy settings on their Facebook accounts, send messages to friends in which they expose themselves, or leave messages or photographs on blogs or on Flicker that will damage their reputations, perhaps irreparably, for years to come. If we care about our students, we will make sure that they learn the harsh facts about online predators and identity theft, and that the seeming innocence of the Internet contains a violent and often lawless dimension that can be mercilessly cruel on the unguarded and the vulnerable.

Enthusiasm for technology and its many wonders must also proceed with a discussion of the right calibration of technology in our lives. Young Americans are now accessing digital media 7 hours a day, and are playing video games for 13 hours a week. With technology so omnipresent in their lives, what is lost in terms of quiet time in nature, focused attention on the brush strokes of an artist, or the sonorous bow of a cello? And when the young do put down their cell phones or turn

off their laptops, are the adults in their lives fully present and available to them, or are the adults themselves modeling sedentary lives of distraction and consumption?

The incorporation of technology must proceed *respectfully* for the good of both teachers and students—without forced mandates and without the (unfortunately routine) insults allocated to educators who question the necessity of technological change or whose first experiences lead to failed lessons when a software program freezes up, a Skype connection breaks off, or a sound system is distorted. Subtleties in the shift of classroom dynamics that technology creates must be investigated—for example, if students are practicing memorizing the conjugation of irregular verbs in a foreign language, does their practice on individual iPhones advance the learning of some students but retard the development of others who need a more collective exercise? How can we let our students know that as educators, their well-being must always be our top priority and that we care about them not just as test score producers on the one hand or gamers on the other, but as learners rich in their own unique singular identities and hitherto unrealized human potential?

Third Synergy: Stopping. Technology has given us everything from the complete works of Shakespeare free of charge and the exact topography of South Africa to dozens of archived films of the Chilean New Song Movement and interviews with winners of Olympic Games of years past. Educators who know how to access these materials, and who can guide young people to embed them in artfully designed classroom presentations, now have a world of resources at their fingertips. Advocates (Gee 2007; Jenkins et al. 2006; Trilling and Fadel 2009) of technology rightfully want to help educators capitalize on these materials, believing that the technology itself will engage young people turned off by the bureaucracy and boredom of schools as they now exist.

Their impatience is understandable—but also often one-sided and without due recognition of the problems that come along with new technologies. We have an abundance of data to indicate that the sheer number of hours youth are spending in front of their handheld devices, iPads, and desktops is correlated with all sorts of negative outcomes, including everything from depression, the inability to adapt to delayed gratification, and an underdeveloped ability to empathize with others in real time (Small and Vorgan 2008). Sherry Turkle (2011) has argued that even though young people may have hundreds of online friends, few of these friends are available in the event of a real life crisis. Teachers find themselves competing with social networks for students' attention and losing, with the result that students' ability to master traditional school curricula is compromised. Nicholas Carr (2010) contends that the Internet is actually making us stupid, especially because of its advocates who claim that knowing information or how to weigh complex and controversial issues are irrelevant to our new world.

Schools cannot make it their task to identify all potential problems that arise with Internet use; they are too vast and labyrinthine. But schools can espouse philosophies of education that aim to promote the self-regulation of the young. They can help young people to recognize the pleasures that are to be found by slowing time down to attend to the subtleties of a sunset, the nuance in a jazz improvisation, and the modulation in an opera singer's interpretation of an aria. It may be that given the accelerated pace of life today that an explicit curriculum in

stopping, observing, and reflecting should be designed. Such a curriculum could expose young people to research on the dangers of excessive Internet use and the need to balance time online with an active social life offline as well as time for physical exercise and the pleasure of solitude in nature. With such a curriculum, educators can encourage students to explore ways of being in the world that need not be technologically mediated, such as a solitary walk in the woods or a quiet conversation with a friend. Educators could help students to move beyond *surfing* and *browsing* to promote *stopping* and *thinking*.

Fourth Synergy: Professional Expertise. Ralph Tyler (1949), in *Basic Principles of Curriculum and Instruction*, described a reactive response to whatever the trends of a given day might be as a "cult of 'presentism'" (p. 18). In this classic text of curriculum theory, Tyler contended that a better approach was to filter contemporary pressures through two lenses: educators' philosophical presuppositions and commitments and research data on schools and learning. This stance, in many ways, bears similarities with the *Didaktik* tradition of continental Europe (Hopmann 2007) and especially with Wolfgang Klafki's (1958/2000, 1994) careful articulation of guiding questions to use in filtering curricular materials. In this understanding, educators have a professional obligation to be clear about their ethics, to inquire into the present meaning and future implications of curricular choices, and to keep abreast of current research findings. Without these, one is simply responding forever to vacillating winds of fashion and inhabiting a professional cultural space without a stable center.

Andy and I cited this passage from Tyler about a "cult of 'presentism'" in our article entitled "The Persistence of Presentism" (2009b) that was recently published in *Teachers College Record*. We used Tyler's critique of social trends to assume that present conditions are so determinative that they must eclipse past wisdom or future speculation to buttress our critique of fast capitalism. We wanted to transcend the superficial fixation on quick fixes and instant gains that characterizes so much of educational change today.

But on a closer examination, one finds that we omitted to mention that Tyler himself changed in later years. A quarter of a century later, Tyler wrote

> I would give much greater emphasis now to careful consideration of the implications for curriculum development of the active role of the student in the learning process. I would also give much greater emphasis to a comprehensive examination of the nonschool areas of student learning in developing curriculum. (Tyler 1977/1993, p. 395)

In regard to the latter, Tyler explicitly mentioned the power of new technologies:

> Since the viewing of television represents for young people the major use of their waking hours, the development of knowledge, skills, attitudes, interests, and habits that will increase the value of this activity is very important. (Tyler 1977/1993, pp. 399–400)

Perhaps because of reformers' advocacy regarding the potential value of television as an instructional tool, it may be that the floodgates were let open for too many teachers to inundate their classrooms with excerpts from game shows, soap

operas, and sporting events that have entertainment value but are of limited merit when attempting to prepare youth to enter a world full of social injustice, economic breakdowns, and environmental catastrophes. Yet we have to recall that Tyler never relented on the need for educators to screen curricular content through their philosophies and through research findings. To the degree that he evaded articulating a philosophy of education—and much more set about showing how to implement a curriculum regardless of one's philosophy—it may be that he inadvertently contributed to an evasion of philosophy that has left educators adrift when confronted with complex curricular decisions. But this deficit does not mean that subsequent educators cannot reconstruct curriculum theory to provide precisely that missing philosophical foundation.

It is here that the *Didaktik* tradition may best be of service. Especially in its Germanic incarnations, *Didaktik*, as a philosophy of education, has viewed educators' roles as inescapably moral ones. Every action—the way a class is begun, how activities are planned and then moderated, which students are given opportunities to speak and which are marginalized—and all of these dimensions are viewed as saturated with meaning-making and require continuous, mindful reflection. Reinvigorating these traditions—or creating awareness of the richness of their legacies in the first place—can ensure that professional expertise is anchored in moral leadership.

Fifth Synergy: Authentic Alignment. Howard Gardner, Mihaly Csikszentmihalyi, and William Damon (2001) contributed a scholarly *tour de force* a decade ago entitled *Good Work: When Excellence and Ethics Meet*. They asked why it was that professional judgment and practice so often become misaligned with practitioners' sense of what is best for their clients. It isn't just educators, for example, who worry that their high aspirations for their students go unrealized not just because of their students' issues but rather because of the ways that educators fail to engage them. Journalists, also, may enter their profession eager to advance public awareness and promote social justice but gradually find themselves covering stories marked more by gore and shock than by sustenance and analysis. Geneticists drawn to their field by its potential to end unnecessary forms of intergenerational disease, likewise, can find themselves selling to the highest bidder to promote arbitrary definitions of beauty and even terminating pregnancies because of parents' fears that a fetus may be slightly less than perfect in every way.

The concept of "authentic alignment" (Gardner et al. 2001, p. 27) was proposed in *Good Work* as a way to gauge whether the diverse components of a professional field—its practitioners, its domain of knowledge and skills, and its field or institutions—enable individuals to do their very best to support the public good. The authors did not enter into an extended discussion of just how degraded many teachers' professional cultures are and just how far many school systems are from approaching authentic alignment. In Charles Payne's (2008) analysis of urban school cultures in the US, virtually any innovation is rapidly sabotaged by teachers who have developed a dogged mistrust of outsiders who seem to come and leave their schools with all of the predictability of a change of seasons.

Payne cautions reformers to attend to the *processes* of change before rushing to anticipated *outcomes*. Schools are complicated institutions, and school cultures

reflect deep social divisions that fall out along lines of race, class, and immigrant status. Blindness to the complexity of these unresolved social issues, amplified by broader social problems much larger than schools themselves, only reinforces the gravity of the problems as dynamics of mistrust and negativity go unaddressed and are compounded over time.

Is technology infused into schools through ongoing dialogue with students and teachers, or is it simply installed as part of administrative fiat? Is technology the top priority for expenditures in a school or district when teacher positions are being cut and a crime wave sweeps through a struggling community? Educators need to know that reformers understand the on-the-ground realities of their lives, including the precariousness of support and the ways in which they perpetually find themselves on the defensive. Authentic alignment is difficult to attain even in the most favorable of circumstances because there are so many variables shaping the lives of professionals, the domain of technical expertise is evolving, and the field of the institutions is unfolding. Yet because the craving for authentic alignment by professionals is so great—because our longing for meaning and purpose in our work is so deeply human—the aspiration for its realization is never-ending. Understanding that the aspiration precedes and transcends technology in schools, thus, is a precondition for its humanistic incorporation into education. Technology, properly calibrated, becomes a means for the realization of potential—not the end in itself.

Sixth Synergy: Integration and Harmonization. In *The Fourth Way* (Hargreaves and Shirley 2009a), integrating networks were advocated as a "catalyst of cohesion" that could help the diverse components of a new change architecture to be mutually supportive rather than disconnected and tenuous. New technologies are rich in potential for supporting such integrating networks and for helping individuals to move their practice beyond the level of iconoclastic pioneer to a more collective practice. If authentic alignment is not so much an individual experience as a collective process of meaning-making and knowledge sharing, then integration and harmonization are necessary complements to the fifth synergy.

Not all networks are technologically mediated, even in the new millennium. Andy and I have studied two large change networks with others (Hargreaves and Shirley 2007; Hargreaves et al. 2009): the Raising Achievement Transforming Learning (RATL) network in England and the Alberta Initiative for School Improvement (AISI) in Canada. From these networks, we have found that large-scale school reform strategies can indeed be effective provided that there is an agile, precise, and sustainable set of practices that teachers can create and spread from one school to another through site visits, regional workshops, and national or provincial meetings.

Andy and I devoted little attention to the role of new technologies in fostering and spreading innovation in RATL and AISI, perhaps because the theme of technology use surfaced in an inconsistent way in the interviews we conducted with educators. Yet this very haphazard nature of technology adaption—surging in one district, neglected in another, and erratic in yet a third—indicates a topic to be explored in greater depth rather than one to be discarded. Fine new empirical work (Daly 2010), supplemented by sophisticated conceptual advancements, is now exploring the power of social networks to enact change. Some of the research

findings on issues related to the density and robustness of network ties have direct implications for sustainable leadership (Hargreaves and Fink 2006). It is in the interaction between technological innovations and social network change strategies that some of the most creative developments may yet occur in the future.

Seventh Synergy: Collective Responsibility. Adults can easily express exasperation and rage at the young for their fixation on and perhaps even addiction to new technologies, but then adults need to ask ourselves: What social spaces do we provide the young to interact with expansive and dynamic social networks outside of the compulsory environment of school? Employees in stores and shopping malls often distrust the young, and there is often no purposeful role to play or activity for the young to accomplish in many informal social settings. Home environments, too often, do not provide testing grounds for developing one's autonomy or challenging one's limits in many regards, especially when large groups of the young seek to come together. Adults in too many settings model for their children distracted, rushed lives that leave little time open for quiet introspection or unhurried conversation.

The seventh synergy of *collective responsibility* is taken from the Finnish "horizon of hope" in the Fourth Way which is preferred over the Anglo-Saxon emphasis on *accountability* as a reform strategy. This, in turn, derived from Andy's leadership of a research team assembled by the Organisation for Economic Cooperation and Development (OECD) that studied the factors explaining Finland's top ranking on the Programme for International Student Assessment (PISA) tests (Hargreaves et al. 2008). Collective responsibility, in this cultural understanding, goes far beyond placing full onus on schools for learning. There is rather a recognition that many factors—a child's home life, his or her parents' income level, and access to museums and concerts—all play decisive roles in the education of the young.

Yet the Finnish model is an exception. Second Way reforms in particular have focused on holding schools accountable for children's learning with little or no acknowledgment of the role of factors such as poverty and social disorganization on learning. In the absence of adult commitment to being fully present with the young, it should cause little wonder that young people find themselves convening with such regularity in the new technologically mediated public spaces of the Internet. The very architecture of our cities and suburbs is often organized with no attention given to the needs of the young to have their own places to congregate. Adults have defaulted on our collective responsibility for the young in this regard. We need to expand our offerings to young people to prove themselves through team building exercises in the wilderness or through traditional art forms such as calligraphy or dance that allow them to explore other dimensions of self-discovery than those mediated by the computer screen.

Coda

In many of his social commentaries, Andy has been preoccupied with conditions of alienated labor that impact educators, although he has used other language to describe its manifestation. Contrived collegiality, performance training sects, and

professional distraction caused by policy constraints have been three of the most salient descriptions of alienated labor in education he has advanced. When not corrected, such symptoms of professional deformation can run rampant, undermining purpose, subverting collaboration, and destroying morale.

Technology has played little role either in assessing these problematic trends in educational change or in addressing them. Technology also has been a relatively absent theme in *The Fourth Way* (Hargreaves and Shirley 2009a). Yet technology's increasingly powerful role in our lives for both positive and negative requires explicit discussion in any serious change architecture.

While *The Fourth Way* (Hargreaves and Shirley 2009a) provides many conceptual tools and practical strategies for improving education, it also seeks to address issues of the *telos*, of the ends of education. The contention is that even with the enormous diversity of human cultures, those ends can be identified and form part of our collective aspirations. Furthermore, those ends are ethical; they entail the release of human potential in conditions of equity, diversity, and freedom.

If we place this moral and ontological imperative at the center of our philosophy of education, then technology can enhance our quest for meaning and dignity. It cannot displace it. It does not matter how riveting the most exciting video game is or how compelling the latest YouTube video is. The quest for meaning and human relationships will endure above and beyond those attractions.

Given this understanding of human nature, the Fourth Way and the seven synergies of mindful teaching can provide a moral compass for making decisions about incorporating technology into schools. Is technology being promoted as a panacea that will leave students who crave eye contact and express themselves well through gestures and movement at the margins of our classrooms? Can technology help students to understand the challenges faced by young people struggling with poverty or AIDS in other parts of the world? Is there an upper limit to how much time we want our young people to spend in front of computer screens or using cell phones, and how do we offer to them a broad repertoire of learning experiences in which computers play little or no part? These larger ethical issues belong at the center of education and must not become marginalized or added into reform plans after all of the measurable targets have been identified.

Technology alone cannot address problems of alienated labor, and it would be mistaken to contend that technology cannot exacerbate issues related to contrived collegiality or performance training sects. But technology does not equate with technocracy. Technology refers to the study and use of tools. This can be done in a mindful and measured manner. When done so, technology may help to modify and alleviate the problems our schools are experiencing today. It may introduce play and creativity into education in ways very much attuned with Fourth Way principles.

Beyond the customization and personalization of education through technology may lie something grander: schools that help our young people to find their personal passions and cultivate them in a manner that takes them deep into the core of what it means to be human. Schools can help our young to learn the ultimate challenge of the human adventure: how to live in peace and dignity with our fellow *Homo sapiens*, cognizant of their uniqueness and grateful for their dazzling singularities. Schools are not just about the transmission of facts or about immersion in a

technologically-mediated present moment. Schools can help our young to be separate from and yet connected with others in these transient, unpredictable, and ultimately ephemeral journeys we call our lives.

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