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Shifting Focus: from books to laptops to face-to-face discussion

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ABSTRACT Contemporary innovations in education tend to be information based or computer driven. A complete curriculum, however, needs flexibility in order to foster skills for shifting from one context to another. Face-to-face skills play an important role in the governance of democratic societies, and 'having a good understanding' of something involves the ability to communicate what is known. The dominant cognitive model of information (information and communications technology) should not weaken the human skills that belong to a full education. Computers need to be seen in a broad educational context. The iClass project and the No-Laptop policy described in this article show two different but related ways of acknowledging the limitations of the modern information paradigm. These two postmodern approaches share a critical distance from computers so as to customize information for specific learning situations. While engaging with computers, educators should weigh specific practices and ask how, and under what circumstances, computers actually contribute to a learning situation.

Introduction

'It is in general the nature of progress to look greater than it really is.' This was the motto chosen by Ludwig Wittgenstein for the first page of his major work, *The Philosophical Investigations* (Wittgenstein, 1953). The aphorism was taken from the Austrian playwright Nestroy, and under closer scrutiny it reveals multiple facets.[1] Considering how often modern advancement magnifies what we later concede to have been distortions or even illusions, we might apply the motto to our topic like this: 'In the Information Age, computers can seem more important than they really are.' Educators who wish to engage information tools and computer skills may unconsciously overlook specific learning situations and the skills implied by those situations. The operative word here is 'overlook.' As Wittgenstein's *Investigations* repeatedly emphasize, we must always remind ourselves to 'look' before imposing ideas or models on a situation.[2] Humans all too easily reach for frictionless models that spin their wheels perfectly but which fail to touch the ground of the daily life. By looking more closely, we open a probing eye that makes education a continuous process of illumination and renewed insight.

My two examples of 'looking more closely' come, on the one hand, from my own experience teaching at the University of California, and on the other from a recent exposure to the European Commission DG Information Society iClass Project. Recounting these two pedagogical situations provides a glimpse of how in the postmodern era we can challenge the drive of modern progress and look more closely at the paradigm of computerization. In both cases, the 'look first' approach seeks a balance of specific practices and maintains a watchful eye over how these practices contribute to education. Neither of the two projects reenacts a pre-modern reaction against information tools as too expensive or 'non-traditional.' Both examples show alternate ways of

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applying the maxims carved into the ancient temple of Phoebus Apollo at Delphi: 'Nothing in excess' and 'Know Thyself.'

Example 1: The No-Laptop Rule

In November 1985, I joined educators in the California Educational Computing Consortium in Oakland, California, to urge computer adaptation in the classroom. Since then, I have written books and articles about computer interaction, even arguing at the First Conference on Cyberspace (1989) that computer screens exert a nearly erotic pull on human attention.[3] Yet despite this admitted fascination, in January 2008 at the University of California at Irvine, I introduced a policy that bans laptops from the classroom where I teach a discussion section of freshmen humanities. What does this reversal mean? What are the broader implications of current struggles in business and education to balance laptops with face-to-face communication? Do we adequately appreciate the power of focus and the ability to shift our focus of attention? Is contemporary society harvesting information technology in ways that are most fruitful for shared publics?

The turning point came for me at the moment when a class of 22 students divided into smaller groups to discuss questions about a classic book on urban planning by Jane Jacobs (1961) (*The Death and Life of Great American Cities*). With roughly five students in each group, the discussions began with two or three students in each group sitting behind laptops. In minutes, the bodies of the laptop students shifted as their individual desk chairs began to angle away from the center of each group. The perceptible shift seemed to increase by the minute and appeared to affect each group by draining fully present attention from the discussion. As energy ebbed from the discussion, other students reached into their backpacks for laptops – ostensibly checking answers or consulting notes, but they may as well have been responding to the diminishing effort by group members to face one another, observe body language, and engage in what some ethical theorists call 'the responsibility of making eye contact.' This weakening of embodied communication may have been happening earlier than the winter of 2008 when it first caught my eye, and it may have escaped notice because my focus is often on the computer terminal that is a fairly essential component of teaching in 'smart classrooms.'[4]

In the graduate seminars I teach, such a draconian ban on laptops seems unnecessary. Mature students appear to relish opportunities to engage in discussion, and many of them use laptops to contribute their own assemblages of images and slides to small-group discussions. But today's freshmen – most of whom have grown up with WiFi, instant messaging (*AIM*), and mobile video – have yet to develop habits that foster face-to-face intellectual community. Their focusing skills seem to not yet include shifting from books to laptops to face-to-face discussion as elements for building intellectual community. One need only sit among freshmen in a large lecture hall of several hundred students and survey laptop screens to be disabused of the notion that information technology of itself deepens the educational experience; while some students are indeed taking notes, every second screen shows *Facebook* this year or *MySpace* last year. Microsoft *Solitaire* ranks high in all seasons, and *AIM* or email is the all-time winner. Do freshmen need an introductory experience of intellectual community before they can be expected to use information tools to enhance their miniature 'publics'? What does this shift of focusing power suggest about the self-organization of broader publics in our society?

In my case, the No-Laptop Rule was not imposed out of a need for more control over the attention of the students. Rather, the point was to foster conditions in which genuine discussion might take place. Students should not only arrive prepared to discuss readings of Shakespeare, Jane Austen, Toni Morrison, Descartes, and John Locke. They should also have time and attention to become present enough to carry on discussions of these writings. While genuine discussion of reading topics in the humanities is not something that can be externally forced upon students, the opportunity for discussion requires nurturing the habit of being fully present to one another, of being able to make eye contact, of finding moments of presence in which, as Martin Buber wrote, 'I and Thou' can appear. Mutual recognition in the Kantian moral sense comes from acknowledging the Other as a free and competent agent with independent interpretive powers. Without the proper conditions, an intellectual community cannot take shape, even an embryonic intellectual community in college where students develop more mature learning and communication skills.

The humanities, as Albert William Levi (1970) pointed out, stem from the trinity of communication, continuity, and criticism. These activities need practice if they are to develop into the habits of engaged public citizens. Without the soil of civility, the seeds of humanistic skills cannot grow.

The No-Laptop Rule, it turns out, had its advocates long before my personal realization. Google the archives of *The Chronicle of Higher Education* and you will find a 2006 controversy over a certain law professor at Memphis University, June Entman. Dr Entman had banned laptops from her lecture hall. 'The computers interfere with making eye contact,' she argued. 'You've got this picket fence between you and the students.' Entman justifies her ban not as a practice for nurturing interaction among students but for maintaining attention in the professor–student relationship. Her students, bristling under her no-laptop rule, were disgruntled and circulated a petition against Professor Entman, even filing a complaint against her with the American Bar Association. The Entman affair stimulated online discussion by other professors who were either considering the No-Laptop policy or who opposed the ban on various grounds. Still, the prevailing assumption in those discussions was how the policy affects the student–teacher relationship, not the interaction among the students themselves.

The No-Laptop controversy extends beyond the corridors of academia. Popular culture, not long after my own policy shift, recognized the problem in the G.B. Trudeau cartoon series *Doonesbury* where slacker students use Google searches during classroom lectures. The cartoon (see Appendix) shows a student named Zipper who uses his laptop to find answers to questions posed by the lecturer, Professor Atkins. In haste to find answers online, Zipper fails to hear the specific live questions addressed to him by the lecturer in real time. Zipper is too busy typing into the search engines to listen to the question, and only when another student prompts him does he wake up to the challenge made in real time by Professor Atkins. The lag between real time and cyberspace can become a jarring dissonance. The two realms interfere with one another so as to create an atmosphere of dysfunction. Telepresence can diminish real presence and the two do not always interlock and support one another. Aware of the dissonance, Zipper becomes frustrated and opts for cyberspace by concluding: 'If this keeps up, I'll never get through my email.' The cartoon ends satirically, lamenting the disharmony between cyberspace and the depth of here-and-now presence.

A similar problem has emerged for those who run business meetings. The disharmony spreads beyond academia and reveals the gap between real presence and telepresence, cell phones and live speakers, laptops and real-time presentations. In fact, this interference has already struck the business community. Meeting invitations at the company Yahoo now frequently ask employees to 'leave your laptops at your desk' rather than bring the laptops to meetings.[5] One business blogger, Jeremy Zawodny, writes:

> I wonder what, if anything, schools (mostly colleges) are doing to help ensure that this isn't a problem in the workplace as more and more students start working full-time. Do they know how to put away the laptop or cell phone when the time comes? Maybe the problem is that the people 'at the top' of many companies set a bad example, walking down the hallway with their eyes glued to a Blackberry screen or constantly plugged into a Borg-like bluetooth headset.[6]

The 'Borg' refers to the cyborgs in the science-fiction TV series *Star Trek* where cybernetically enhanced humanoid drones function as an inter-connected collective entity living in a hive mentality. Similarly, *The Los Angeles Times* carried a business article by Jessica Guynn on 31 March 2008 with the title 'Laptops in Silicon Valley' in which the No-Laptop policy seems to be affecting a change in the ethos of meetings throughout the high-tech sector of San Jose/San Francisco. Even the computer business cannot afford to allow computers to dominate every business situation.

Example 2: The iClass Development

The second example of a pedagogical situation with a distinct postmodern flavor comes from the European iClass project begun in 2004. The project began as a major collective effort of 22 EU partners led by Siemens IT Solutions and Services. The goal was to integrate ICT (web-based learning) into the shared purposes of the various ministries of education, school heads, teachers,

and researchers throughout the European Union. The ambitious scope of this large-scale 13-million-euro project first became clear to me during my participation in the 2008 symposium on iClass, 'When the Virtual Meets Virtue: From e-Learning to e-Education' held on 26-27 May in Brussels. Further understanding of iClass came from my study of the software created by the project, from presentations by people who developed the project, and from personal conversations with Professor Roni Aviram (Ben-Gurion University) who chaired the project from 2006-08. Literature about the iClass project can be found on European Schoolnet websites.[7]

In the context of this article, the most striking aspect of iClass is the gap during its genesis between the original intentions of the project – which seem modernist in attitude – and the end product of the educational software, which seems postmodern in its shift of focus. The modern attitude posits an idealism of the machine, the hope of replacing chaotic processes with a rational order founded on a complete system. The modernist attitude is one that seeks to substitute a fully transparent system for the historically haphazard arrangements found in daily life. The modernist advocates a machine model, much as the architecture of Gropius's Bauhaus and the subsequent International Style advocated the geometrical box of glass and steel stripped of all ornamentation, what Le Corbusier called 'machines for living.' Modernism is a revolution that replaces traditional practices with completely rational systems. The computer revolution has its genesis with the modernist revolution (Leibniz, mathematical systems, Turing's Universal Machine) but the Web is distinctively postmodern in its de-centralization. While the iClass project began with some modernist assumptions, it later morphed into a postmodern and web-based shape.

Beginning in 2004, during the initial 2-year phase of the iClass project, the iClass goal was the 'computerization' of pedagogy, even aiming to 'replace the teacher' with information technology. The personal computer revolution of the late twentieth century sparked hope of putting an end to the vagaries and mixed record of traditional educational institutions with their ever-changing theories of student–teacher pedagogy. By contrast, the 2008 version of the iClass software strives to integrate software into the plans and decision-making that arise in the course of daily interaction between students and teachers meeting face to face in classrooms. The ORT France demonstration video makes this point explicitly: 'iClass is like your coach, always there and ready to help,' and 'iClass is a tool to help both teacher and students,' and 'iClass won't replace your teacher and isn't meant to.' Instead of living inside the machine, students keep the computer nearby as an aid to enhance the educational experience. The focus is not exclusively on the computer screen. Even while the computer supports the interaction of students and teachers, the computer is not simply a detached tool. The information system is woven into the highest level of interaction between student and teacher, at the meta-level of planning, monitoring, reflecting, and evaluating educational tasks. The iClass software augments and extends the cognitive activities of the student while also adding to the face-to-face exchanges between student and teacher as well as among students themselves.

As far as I have gathered, the break with modernist aspirations came in 2006 with Professor Roni Aviram's injection of new goals into a faltering project. He re-organized the modernist goals by introducing existentialist components such as personalized choice and autonomous self-regulation throughout the learning process. Without the injection of the personal meta-level, the iClass project may not have found the postmodern footing that supports nimble shifts of attention from screen to books to face-to-face communication. Instead of replacing the classroom with information systems, the 2006 revised iClass project wrote software for the meta-cognitive level where learning is planned, monitored, and evaluated. The meta-levels of learning – choosing learning goals, setting up a strategy for information acquisition, using communication tools on individual and group levels – all become integrated into a software interface which then manifests a dynamic model of self-regulated personalized learning. The software design becomes an open (cyclic) reflection of the student's 'learning how to learn.' The software mirrors the learner as the learner sets goals, monitors the performance of learning behavior, and then reflects on the learning activity to evaluate what has taken place. In this way, the student develops a set of skills that preserve personal autonomy in a world of multiple jobs and changing careers. At the center is the learning person and not the educational system. The software aesthetically integrates many components including email, web search engines, calendar and project planning. The integrated

aesthetic platform is itself both performance tool and ever-changing mirror that reflects the maturing intellect of the student.

The strategies of self-regulating personalization in iClass and the No-Laptop policy in the humanities classroom share something in common: they belong to the same family of postmodern strategies. They are not deductive results of the identical principle, but they are members of the same family. What we see in the iClass shift of focus – a shift from information systems to personal self-regulating activity – and what we see in the No-Laptop policy are what Andrew Feenberg (1997) called 'alternative modernities.' Whereas the modernist movement, from its Cartesian origins, sought monolithic models and absolute foundations for a single modernity, the postmodern condition entertains a plurality of variations, of alternative initiatives that co-exist. Like Wittgenstein's 'family resemblances,' these various instances of modern life share no single absolutely dominant shape that enforces conformity to a model or governing rule. Rather than modernize every instance of life indiscriminately, the postmodern condition releases and nurtures alternate approaches. Modernity is preserved but modified and localized. In the terms of this article, the postmodern eye is not fixed with a continuous stare but rather allows frequent shifts of focus that keep pace with rapid changes in the cultural environment. The challenge is to achieve focus and presence of mind in the shifting circumstances.

Notes

[1] 'Überhaupt hat der Fortschritt das an sich, daß er viel größer ausschaut, als er wirklich ist.' See Kevin Cahill's (2006) article in the *Review of Metaphysics*, 'The Concept of Progress in Wittgenstein's Thought.' Cahill applies this statement to several dominant paradigms as well as to Wittgenstein's own self-critique.

[2] For one of the many places where Wittgenstein warns us not to be 'blinded by the ideal and fail to see clearly the actual application,' see *The Philosophical Investigations* (1953), paragraph 100.

[3] See Heim (1991), 'The Erotic Ontology of Cyberspace'. The First Conference on Cyberspace was held at the University of Texas in Austin, 4-5 May 1989. The paper later became a chapter in *The Metaphysics of Virtual Reality* (Heim, 1993).

[4] See the Appendix of illustrations for a photo of one of these 'smart classrooms' in the Humanities Hall at the University of California at Irvine. The verbal description in this article pales beside the photo show I use to present this same narrative to a live audience. Again, we need to *look* at the embodiment of our technology practices.

[5] See the blog 'New Rules at the Staff Meeting: no laptops allowed' by Christopher Null at Yahoo Tech from March 2008. http://tinyurl.com/64tl7n

[6] See the blog by Jeremy Zawodny: http://jeremy.zawodny.com/blog/archives/010076.html

[7] See, for instance, http://insight.eun.org/ww/en/pub/insight/school_innovation/learnenv/iclass.htm. And the iClass Site: http://www.iclass.info. The software is online at: http://release.iclassproject.com

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APPENDIX

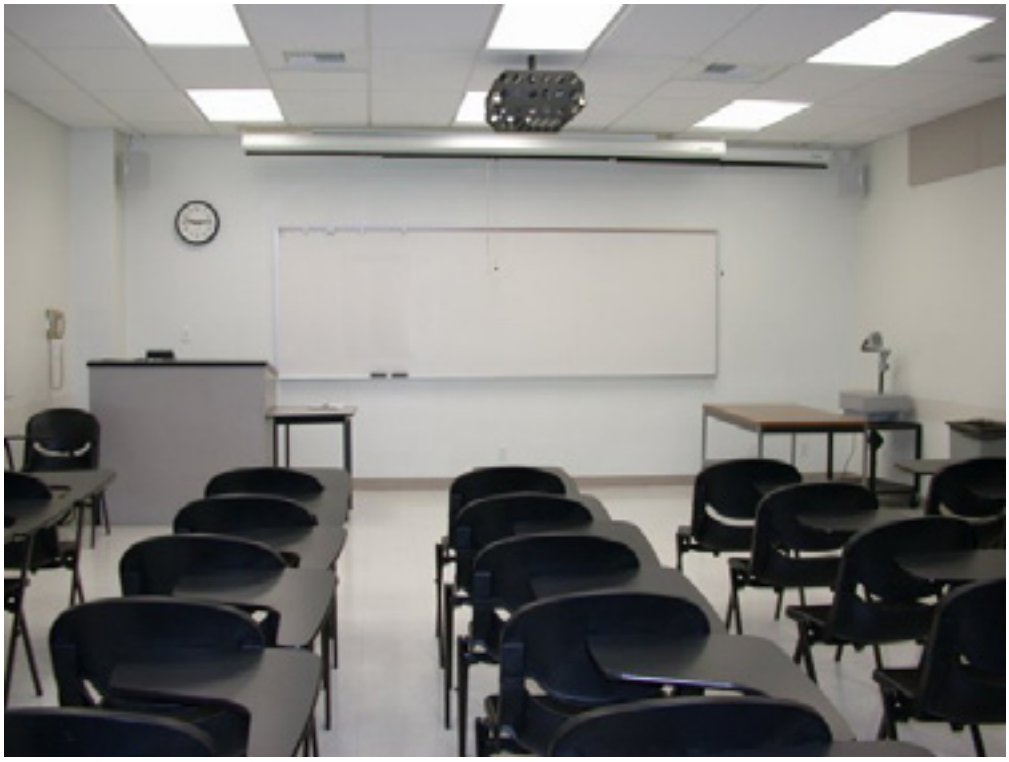

Figure A1. Smart classroom at University of California, Irvine.

Figure A2. Smart classroom at University of California, Irvine.

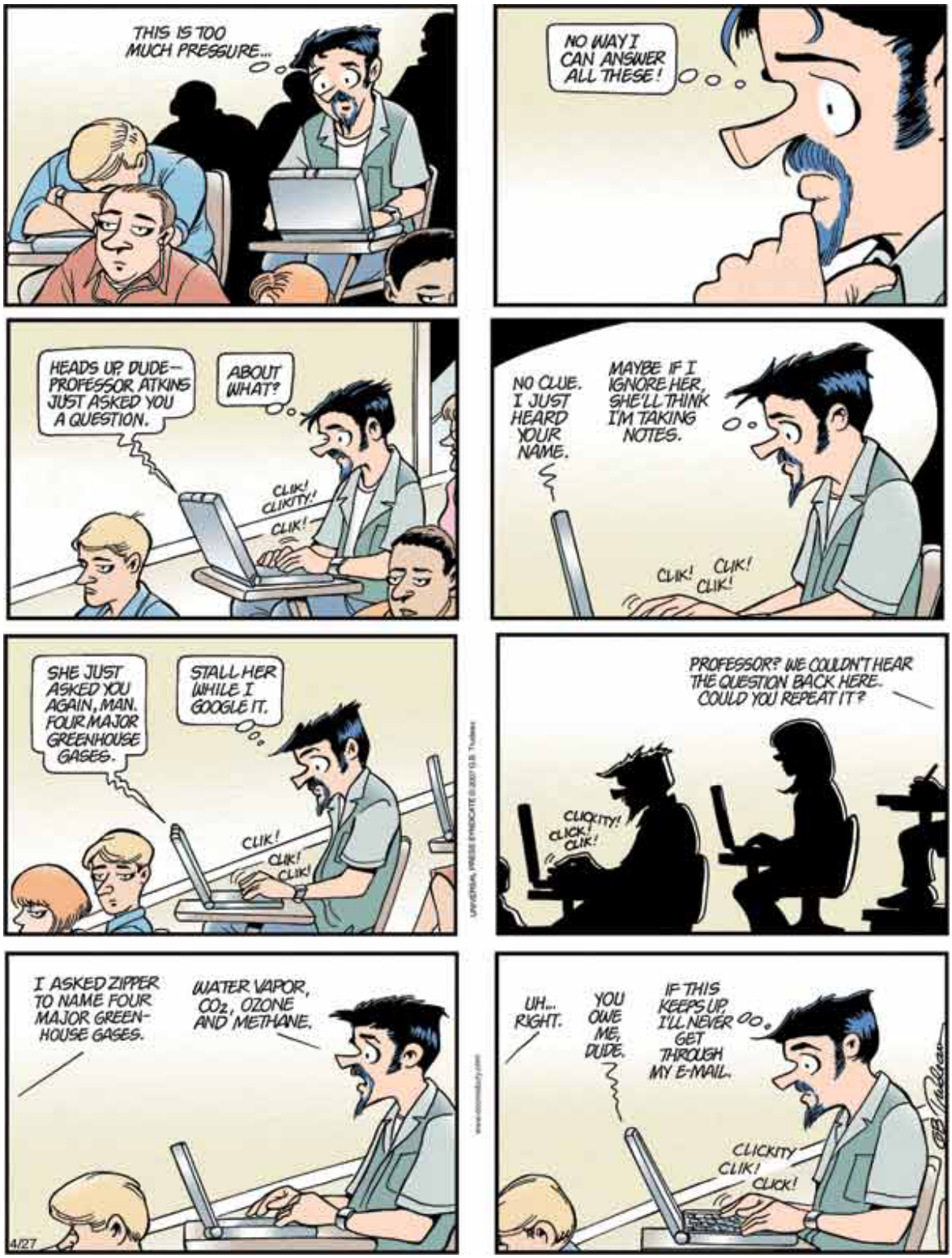

Figure 2. Doonesbury – *Los Angeles Times*, April 27, 2008.

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