



## Teachers Building Dwelling Thinking with Slideware

by Catherine A. Adams

### Abstract

*Teacher-student discourse is increasingly mediated through, by and with information and communication technologies: in-class discussions have found new, textually-rich venues online; chalk and whiteboard lectures are rapidly giving way to PowerPoint presentations. Yet, what does this mean experientially for teachers? This paper reports on a phenomenological study investigating teachers' lived experiences of PowerPoint in post-secondary classrooms. As teachers become more informed about the affordances of information and communication technology like PowerPoint and consequently take up and use these tools in their classrooms, their teaching practices, relations with students, and ways of interpreting the world are simultaneously in-formed – conformed, deformed and reformed – by the given technology-in-use. The paper is framed in light of Martin Heidegger's "Building Dwelling Thinking" (1951) and "The Thing" (1949). In these writings, Heidegger shows how a thing opens a new world to us, revealing novel structures of experience and meaning, and inviting us to a different style of being, thinking and doing.*

[The machine] hacks the stone starker for more determined building  
So we won't be drawn by the lovelier lingering of the master-hand.  
(Rilke, 1975, p. 157)

At a faculty development workshop on applying brain research to enhance instruction, a brief technical glitch prompts the presenter humorously to remark, "If PowerPoint crashes, my IQ will drop 20 points!" Andy Clark (2003) opens his *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence* by recounting the recent loss of his laptop, an experience he likens to "a sudden and vicious type of (hopefully transient) brain damage ... the cyborg equivalent of a mild stroke" (pp. 4 & 10). Such anecdotes, jokingly hyperbolic in their account, nonetheless allude to the tight intimacies, the primordial interminglings, and, at times, the acute dependencies we have come to find ourselves living

with technology today. Our being-in-the-world is ever more adumbrated by, folded into and transpermeated by the objects of our post-human world. We are, it seems, "natural-born cyborgs, forever ready to merge our mental activities with the operations of pen, paper, and electronics" (Clark, 2003, p. 7).

Using PowerPoint as a touchstone, this research investigates how teachers are not only aided, "enhanced", and sometimes constrained, by the particular media and technologies-in-use, but are also enmeshed and relinquished to the language, imagery, framing, at-handedness and sensuality of their materiality and design. As Maurice Merleau-Ponty

(1945/2002) observes, “our existence changes with the appropriation of a fresh instrument” (p. 143). We may wonder, then, what transformations of perception occur, what translations of action manifest, whenever we take up a “fresh instrument”, in this case PowerPoint, in the lived space of the classroom? To address the *qualis* or “what-ness” nature of such questions, a qualitative research approach is called for. In particular, hermeneutic phenomenological inquiry explicitly positions the researcher to comprehend information and communication technologies not as solely objective or subjective phenomena, but as *lived*.

The phenomenological study presented in this paper involved in-depth interviews with twelve instructors who have used or regularly use PowerPoint on two different university campuses in Canada, observation of undergraduate lecture classes, and reflection on my own use of PowerPoint as a post-secondary teacher. A hermeneutic phenomenological methodology (Van Manen, 1990/1997) was used to capture the particularities of the PowerPoint experience in the form of lived experience descriptions (LEDs). The methods employed include thematic analysis, linguistic interpretations, and honing of exemplary or anecdotal narratives through eidetic reduction. The phenomenological descriptions represented here have been culled from participants’ recollections of actual experiences using PowerPoint, and supplemented by my observations of PowerPoint-enhanced lecture classes and personal reflections on my own use of this software.

### Hermeneutic Phenomenology

The main focus and aim of phenomenological inquiry is the description of lived experience, that is, the description of phenomena as they present themselves or as they are given to us in experience. As such, phenomenology is primarily concerned with how we experience our world *pre-reflectively*, *pre-verbally*, in its lived immediacy. Further to describing experience, *hermeneutic* phenomenology seeks to draw out the meaning or significance of our practical involvements in the world. Such research formulates questions of the type “What is this or that human experience like?” It is an attempt to return “to the things themselves” (*Zu den Sachen selbst*), and, further, to let these things speak for themselves (Heidegger, 1927/1962). Phenomenology is not interested in conceptualizing, theorizing or idealizing experience, but rather in describing and interpreting experience as it is lived.

Phenomenological research requires a “heedful, mindful wondering about the project of life” (Van Manen, 1990/1997, p. 38). It is thus an attitude. Phenomenology is also a writing project not unlike

that of poetry. It demands careful attention to the subtle undertones of language in order to gently draw out that which is taken for granted and withdrawn in our background, that which would otherwise remain silent. The phenomenologist must learn to listen to the ways the things of the world speak silently to us, and then, through text, sensitively render that whispered speech. Phenomenological writing intends to evoke in the reader the experience of the phenomenon being studied, as well as to invite a sense of wonder about it. To accomplish this, the researcher must approach the phenomenon under study with openness, and, too, must come to know it, and live it, intimately. To this end, Van Manen (1990/1997) outlines a way for doing phenomenological research. He describes several heuristic activities that are dynamically interrelated.

### *Orienting to the Phenomenon: Wondering about PowerPoint*

Recently I explained to one of my colleagues (an avid PowerPoint user) that I have been studying the phenomenon of PowerPoint. He responded with disbelief. “Why would you be interested in studying PowerPoint? What is there to study about it? PowerPoint is just a piece of software that helps to organize lectures. End of story.” But when I began to describe, by way of some anecdotes, what I have seen happening in classrooms and conferences, my colleague began to perk up: “Yes, I suppose PowerPoint has changed the way I think about my teaching. And I can see how some students might experience split attention in PowerPoint classes.” After a few more examples, my colleague said: “I wonder what it is about PowerPoint that these things are happening?”

Phenomenological research begins with identifying a question of significant interest and wonder. The question must be of personal “abiding concern” to the researcher, and address a phenomenon that human beings live through. Arriving at such a question is to commit to a quest, or a deep form of questioning, for which no definitive answer is expected to be found. Rather, the aim is towards insight into what it is to be human, towards “re-achieving a direct and primitive contact with the world” (Merleau-Ponty, 1945/2002, p. vii).

The researcher’s orientation is at once his or her intentionality, or directedness and attachment to the world – for instance, as a teacher, mathematician, parent or researcher. Furthermore, the researcher must strive for openness towards the phenomenon itself, so as to allow “the structure of the lived experience [to be] revealed to us in such a fashion that we are now able to grasp the nature and significance of this

experience in a hitherto unseen way” (Van Manen, 1984, p. 43). Part of this process of opening to the phenomenon involves *bracketing* or suspending one’s preconceptions and presuppositions as much as possible – for example, through making these explicit. The central activity initiated here is wonder, or awakening to the essential mystery of the phenomenon: “this fundamental amazement animates one’s questioning of the meaning of the experience of the world” (Van Manen, 1990/1997, p. 185).

### ***Investigating Existentially: Collecting Descriptions of Lived Experience***

A central feature of phenomenological research is the gathering of a field of descriptive evidence from which underlying patterns and structures of experience can be drawn. Phenomenological research data is generated through a number of sources: recounting personal lived experiences (constructing anecdotal accounts from one’s own life experiences of the phenomenon), interviewing others to collect lived experiential descriptions, observation, tracing etymological sources and gathering idiomatic phrases, locating experiential material from literary and artistic works, and consulting other phenomenological writings as “insight cultivators” (Van Manen, 1990/1997).

The twelve interview participants selected for this study were chosen from diverse disciplinary teaching areas, including Language Arts Education, Recreation Studies, Instructional Design, and Computer Science. All participants had at least five years of teaching experience at the post-secondary level. Ten of the twelve interviewed regularly used PowerPoint in their classes. Of the two “non-PowerPoint” teachers, both were competent users (for example, they had given PowerPoint presentations at conferences or short workshops), but indicated that their non-use of PowerPoint in teaching was a deliberate choice.

### ***Cultivating Insight: Reading Phenomenological Literature***

Phenomenological research also requires a systematic scholarly reading of relevant philosophical literature and phenomenological studies to help shed light on the phenomenon being studied. In this case, there is a growing body of historical and current philosophical literature on human-technology relations to consult. For example, Ihde (1990), in his study of technics, reveals four types of human-technology relations: embodiment, hermeneutic, alterity and background. While Ihde’s set of human-technology relations is neither exhaustive nor mutually exclusive, his categories may serve to awaken us to the multitude of ways we engage technologies every day. In

considering the use of PowerPoint in the classroom situation, we may discern several of these relational moments. For example, the teacher takes up two significant but experientially distinct *embodiment* relations with PowerPoint: (1) initially, in composing a presentation through the PowerPoint software application on a computer, and (2) later, in presenting the composed PowerPoint presentation with laptop and data projector. In both cases, we may discern different ways of being existentially swayed by the particular PowerPoint configuration. The software script invites the teacher differently than does the finished presentation in the context of the classroom. *Hermeneutically*, the teacher composing a PowerPoint presentation must learn to read (and write in) the language of the PowerPoint software interface: menus, toolbars and templates, keyboard, screen and mouse. The teacher as presenter also reads (both literally and figuratively) and interprets for students each PowerPoint slide. Thus, the teacher engages PowerPoint hermeneutically as well as existentially.

### ***Reflecting Phenomenologically***

As phenomenological data is collected, it is read in search of its themes. Phenomenological themes are the experiential structures that define and give meaning to the phenomenon, signifying its unique lived-through qualities. Such experiential structures are most evocatively revealed and represented in anecdotal form. A number of techniques are available for approaching this discovery or interpretive process of thematic analysis. For this study, the interview texts were approached using several techniques suggested by Van Manen (1990/1997) to help isolate thematic statements: macro (a holistic reading) analysis, micro (a detailed, line-by-line) analysis, as well as reflection on the four lifeworld existentials – temporality, spatiality, corporality, and relationality – as they present themselves (or not) in the texts.

A good phenomenological description or anecdote resonates with life, triggering a flash of recognition and often evoking the phenomenological nod (Buytendijk, 1962, in Van Manen, 1990/1997). For example, in an open-ended interview, a student relates:

*In my class the other day, I asked a question and my Prof said she’d be covering that a few slides ahead. But then several slides later I remember thinking, hey, she’s forgotten my question. I felt annoyed and wanted to say something, but then I couldn’t remember exactly what I was wondering about. The moment had passed.*

The experience of a teacher not responding immediately to a question in deference to the PowerPoint slide set order is not an unusual one. Of course, it may not in all cases be pedagogically appropriate to answer a student's question at that exact moment. However, relating this particular anecdote to college students will typically evoke the phenomenological nod, "Yes, I've experienced that!" Such a response tends to suggest that this anecdote embodies an important experiential structure unique to PowerPoint. As researcher, one might begin by tentatively labelling it with a theme like: "questions deferred relative to slide order". However, one may later, based on further data, discover a more evocative handle that more neatly describes this aspect of the phenomenon, for example: "You have a question? Yes, I'll be answering that a few slides ahead ...". This is an example of the process of macro thematic analysis.

There are other important techniques or methodological devices used as part of this analytic process. For example, reduction, or "the ambition to make reflection emulate the unreflective life of consciousness" (Merleau-Ponty, 1945/2002, p. xvi), is a primary phenomenological device here. Reduction is a constellation of a number of methods. One example is the *eidetic reduction*. This method begins by comparing the phenomenon with other related but different phenomena in order to help discern what the phenomenon *is not*. Knowing what a phenomenon *is not* brings us a little closer to what it *is*. One could, for example, compare teachers' lived experience descriptions of giving overhead presentations with those of using PowerPoint. Both sets of experiences will share certain experiential structures, since they are both kinds of technology-mediated lecture experiences in a classroom. However, the overhead presentation descriptions can serve to separate and "pull away" those meaning structures that are not unique to PowerPoint presentations.

### ***The Sensitive Art of Phenomenological Writing***

The researcher must find language sensitive to the phenomenon, allowing the phenomenon to speak for itself, to reveal its unique being or *esse*: "to write phenomenologically is the untiring effort to author a sensitive grasp of being itself – of that which authors us, what makes it possible for us to be and speak as parents and teachers, etc., in the first place" (Van Manen, 1990/1997, p. 68). Van Manen suggests several possible ways of structuring one's phenomenological writing, for example, thematically, or existentially, using the four existential themes of time, space, body and relation. Ideally, the structure of the document is decided by the phenomenon itself, a move towards attaining the Heideggerian ideal of

letting the phenomenon speak for itself.

For this study, Heidegger's "Building Dwelling Thinking" (1951/1971a) and "The Thing" (1949/1971b) proved particularly helpful in illuminating and giving language to the intimate, prereflective involvements the teacher-participants seemed to be engaging with PowerPoint. In these essays, Heidegger shows how a thing (or a place) opens a world to us, revealing novel structures of experience and meaning. Each technology discloses a new horizon of possibilities to us. We are "the be-thinged" (1949/1971b, p. 181); we are prereflectively inhabited, conditioned and creatively provoked by the things of our world.

### **Building-With PowerPoint**

The architectural spaces we design, build and inhabit influence in subtle and sometimes significant ways our activities thereafter. Sir Winston Churchill once famously observed that "we shape our buildings and, afterwards, our buildings shape us." He made this statement in 1943 to the House of Commons in a bid to have the old chamber, bombed on 10 May 1941, "restored in all essentials to its old form, convenience and dignity" (The Churchill Centre, 2005). Churchill

recognised that the intimacy of the old chamber had created an environment for lively and intense debate, whilst the rows of opposing benches had created the two-party system – in Churchill's eyes the bed-rock of British parliamentary democracy. Thus the limited space and seating – so often berated by Members in the past – was now seen as a virtue, along with the confrontation-inducing layout. Indeed it had come to define the very nature of government and parliament. (Riding, 2005, ¶3-4)

Such subtle but decisive shaping of practice is not limited to our architectural structures. All built (designed) objects invite us wittingly and unwittingly to extend or change our relationship to our world. Mobile phones, for example, have served to alter dramatically the way some of us stay in touch with one another, challenging and reframing previously stable notions such as availability and autonomy, and public and private spaces (Arnold, 2003). Such enhancements or transformations may range from minor to profound. Yet often the full spectrum of effects is unanticipated and unseen until the object is integrated transparently into our lives. And, by then, life is different; we may wonder only how we lived without this or that gadget.

### **The PowerPoint Invitation**

According to Illich (1996), we are dwelling today in a *milieu technique*, the irresistible sway of high technology environs. The technological milieu is shaping substantially – insinuating itself, habituating us and simultaneously reinterpreting – how we act in and perceive the world. To gain access to the unique tenor and structure of this new milieu, Illich suggests that we look beyond what technological objects *do*, and attend to what they *say* to us. To “hear” what an object of technology might say to us, we must enter the realm of lived experience, and orient ourselves to prereflective or “pathic” (Straus, 1966) knowing. Within the situated, relational, embodied context of lived space, each object or place presents a unique appeal to us, as Van Manen (1990/1997) illustrates: “cool water invites us to drink, the sandy beach invites the child to play, an easy chair invites our tired body to sink in it” (p. 21). Of course, beaches and easy chairs do not “speak” to us in the same way as people do. Our cultural pre-understandings also provide the “conditions whereby we experience something – whereby what we encounter says something to us” (Gadamer, 1976, p. 9). Nonetheless, we can see how, having pre-reflectively responded to the invitational quality, we enter into a “rapport with things” (Heidegger, 1951/1971a, p. 157); we become ontologically and hermeneutically engaged. What, then, is PowerPoint’s *vocative* appeal to a teacher in the lived space of the classroom? What invitation does PowerPoint issue to a teacher as s/he is preparing for a class?

### **Constructing a Lesson with PowerPoint**

The call or appeal of PowerPoint is at once a linguistic gesture (“Microsoft PowerPoint”, “Click to add title”, “• Click to add text”), a promisingly familiar visual digital environment, a complex hermeneutic horizon of previous PowerPoint experiences, as well as entrance to an intentional, architected form, a windowed milieu that the teacher may traverse with her eyes upon screen, fingertips on keyboard, hand on mouse. As Heidegger (1951/1972) tells us, “When we handle a thing, for example, our hand must fit itself to the thing. Use implies a fitting response” (p. 187). Reaching out with anticipation of PowerPoint’s promise to help her point powerfully, the teacher orients herself toward her windowed screen; her being is drawn in and gently caught in the “draft” of PowerPoint, the unique horizon of possibilities it brightly offers. She responds fittingly.

One teacher describes how she constructs a lesson using PowerPoint:

*I insert an image, add some text, then try*

*them in different positions on the slide. I’m looking for balance. I like using compelling images, with minimal, carefully chosen text for impact. As I work, I do not, cannot, separate the composition of the slides themselves from the subject matter at hand, the vision of my students, and the appeal I am trying to make. I sit back and look (perhaps trying to see the slide as my students might), then adjust, and adjust things again. I try out different fonts, sample background colours from my images, wanting to give the whole presentation a sense of visual cohesion. I take a certain pleasure and satisfaction in this. I move to Slide Sorter View [where all the slide thumbprints are laid out across the window] to grasp the whole so far, to visualize the general flow of the presentation. From here, I move a few slides to a different place in the sequence to see how that flows, then return to Normal View. I find I am variously engaged with trying to represent the content, the purpose of this teaching presentation, visually, in text, or both, and thinking about, imagining, presenting the slides to my class.<sup>1</sup>*

Within the PowerPoint environment or milieu, the teacher’s work materializes as an accumulating series of slides. The basic elements of each slide are text, images, colour, and animation. The teacher composes, adjusts, tries out new fonts, samples colours, switches “views”, plays with order. She is engaged in representing content as slides, then imagining the presentation in the immediacy of a classroom with her students. Slides, subject matter, the vision of her students, and her presentational and teacherly intentions, intermingle.

In performing this preparatory work, the teacher is sitting in her office with computer, screen, keyboard and mouse; texts and papers litter the desk. Her screen shows numerous windows open: a web browser, email, a Word document, as well as PowerPoint. Occasionally her eyes wander from the screen, and stare thoughtfully through her office window into the distance. She turns back to the PowerPoint window, pulls her keyboard a little closer, nudges her mouse and continues working. Once the

<sup>1</sup> The italicized text represents phenomenological research material drawn from the transcripts of individual interviews conducted in 2007 with twelve university and college instructors about their lived experiences of PowerPoint.

teacher is engaged in her preparation work, her office, desk, screen, keyboard and mouse recede into the background. PowerPoint too withdraws from full view, fading to a transparent framework, a sophisticated but peripherally present set of tools that she may variously call upon to perform her presentation design activities in this digital world.

The work-object or focal project of our instructor is not PowerPoint. Her project is the classroom situation she will find herself in a few days hence. As teacher, her primary intention is to creatively assist her students in learning the particular subject matter at hand. For this purpose, for this subject matter, she has chosen to use PowerPoint. While the presentation software thus frames and facilitates her activity of planning a lesson, PowerPoint is not the main objective and intention, anymore than canvas and paint palette are the objective and intention of the artist. Nonetheless, we must also notice how the instructor's activity patterns and meaning structures are furthermore being quietly *in-formed* – conformed, deformed, and reformed – by the architecture of the particular software she finds herself *inhabiting*.

### ***Inhabiting PowerPoint***

In PowerPoint, the teacher sees and understands her teaching world in light of the particular horizon of possibilities this software unfolds to her as she works: slides, menus, animations, Slide Sorter View, Normal View. Her lesson planning world unfolds in the context of a bright, spacious rectangular “window”, a white surface framed by and containing explicit text and iconic invitations – “Format, Font, Template, Click to add title, • click to add text, click to add notes”. It is a world of surface and interface that she touches and negotiates some small distance away with the tips of her fingers across the keyboard and intermittent small shufflings of her hand wrapped gently about the mouse, or the quick taps and deliberate swishes of her pointer finger against the mousepad, her thumb as a helpful second.

Ihde (1990) suggests that “technologies, by providing a framework for action, ... form intentionalities and inclinations within which use-patterns take dominant shape” (p. 141). In PowerPoint, the teacher “does not, cannot, separate” the software's possibilities and designs from her own: the aims and inscriptions of the Microsoft programming team and the teacher's intentionalities and inclinations intertwine, enmesh and reorient. The teacher's world is translated into new vocabularies and presentation genres, expanding her possibilities of action while simultaneously framing and constraining the world as a screenic succession of 4:3 slides.

Having answered the call of PowerPoint – its invitational qualities or affordances – the teacher enters a mode of human-technology engagement which Chesher (in Suchman, 2007) describes as “managed indeterminacy” or *invocation*. “Invocation involves those actions that define the terms of engagement written into the design script or discovered by the participating user” (Suchman, 2007, p. 282). The teacher is now conversationally engaged, enfolded and intertwined with PowerPoint. The teacher-technology relational boundaries blur and a hermeneutically rich but “silent”<sup>2</sup> corporeal rapport sets in.

### **Thinking-With PowerPoint**

#### ***Aesthetic/Anaesthetic Experiences of PowerPoint***

Another instructor recalls how he went about composing a particular PowerPoint presentation for a college class:

*I didn't start from scratch. I used a copy of another PowerPoint of mine from the same class and gutted it. I scanned through the chapter [of the textbook] and pulled out the main headings: the important ones, but also sections I know my students might have trouble with. I inserted those as slide headings. Then I pull out a few key points for each heading. I limit myself to five, maybe six, bullets a slide. So here I end up with several slides with the same heading. I go back and forth though. Sometimes, I fill in a slide title, then add the points right away. I've used this particular slide deck for a few years. It has more images now than when I first used it. Plus I've taken out some of the bullets and organized the points somewhat differently on a few slides. For example, here, the points make more sense in a circle. I realized this when I was explaining it in class. But also, there's the monotony of it. I was putting myself to sleep with endless lists of bullet points.*

This teacher is fully engaged in efficiently and methodically representing the main content of his course as slide headings, each followed by a series of bulleted points. He points out that, over time, he has

<sup>2</sup> Sartre describes our everyday experience of our bodies as “*passé sous silence*” – passed over in silence (Sartre, quoted in Bleeker & Mulderij, 2002). In a similar way, our experience of the tools we are using (proficiently) sinks into a transparent, “silent” sphere. Indeed, “in order to be what they are, tools must recede from visibility” (Harman, 2007, p. 62).

made some adjustments in representational form beyond his usual choice of bullet points. This reworking was spurred by his noticing, in the midst of presenting his slides, that some bullet points might be better expressed as a circle rather than as a list, serving to more accurately illustrate the relationship between points. Moreover, the same bulleted format slide after slide was striking him as monotonous and sporadic.

But perhaps most striking about the teacher's account is how the entire preparation of the lesson proceeds in terms of "points" that are presumably key concepts of the lesson. It is as if the teacher is engaged in composing headlines for a story, while the story itself (the knowledge, values and skills that inhere in the subject to be taught) remains invisible. The preparatory milieu of PowerPoint technologizes the manner in which subject matter knowledge is shaped and embodied by the teacher. Instead of writing, for example, the script of an illustrative story to tell, the teacher is shuffling headlines and subheadings for the lesson. Like the technique of acronym which translates long-winded phrases and titles to shorter-breath shorthand, the PowerPoint slide encourages the collapse of narrative and argument to points and subpoints. How will this focus on "points" influence the presentational quality of the lesson and the knowledge re-presented in this presentational mode of teaching?

Another teacher describes a somewhat different approach and focus when composing her PowerPoint slides:

*Composing this slide, there was a particular aesthetic I was striving for: thoughtful use of colour, thematic cohesiveness, consistency between the slides (not sameness!), but also movement, meaningful movement through and among the slides. There is clearly an art to this.*

This teacher is more concerned with visual appeal and thematic integrity than with the subject matter. She is sensitive to movement "through and among" her slides. Movement has significance. The teacher is trying to be sensitive to the atmospheric quality the PowerPoint slides bring to her classroom. This raises the question of how teachers often anticipate atmosphere in the planning of a lesson, and how the aesthetic of PowerPoint slides may be seen as an evocative tool for establishing different spheres.

### **Dwelling-With PowerPoint**

Enter teacher with trolley replete with laptop, mouse and data projector. Untangling the garage-band knot

of electrical cords and connector cables, the teacher connects, plugs in and turns on the laptop and projector. This process is sometimes accompanied by palpable anxiety surrounding the stages of equipment hook-up, and worries about self-competence in the face of difficulties or breakdown and the implications of "no PowerPoint" to the fate of the class. The projector hums at last, the slides are cued up. The teacher breathes a quiet sigh of relief.

### **Configuring a Televisual (Screenic) Space**

The simple act of drawing the blinds or switching off the light darkens perceptibly the hue of the wall, softens the faces of students. The teacher becomes less visible; the projected slide shines brighter. The mood changes, the classroom atmosphere shifts. PowerPoint reconfigures the classroom as a cinematic space: the students settle in as spectators, while the teacher orates, narrating the slides from the side. As the teacher turns to the opening slide, the students are cued to sit back, get comfortable and (hopefully) "enjoy" the PowerPoint presentation with a certain sense of passivity. A subtle change occurs in the students' attitude and orientation. The large, bright slideshow reminds students that they may become a particular kind of audience, "invigorated or drowsy, [but] a generally passive audience that is rarely called upon to really interrogate the images" (Crang, 2003, p. 242). As students are drawn into the PowerPoint show as spectators, what of the teacher?

### **The Vocal Rhythm of PowerPoint**

*I notice when I turn to begin my PowerPoint, I shift my role slightly – I'm less conversational, more oratorical. PowerPoint locks you into a gait in your speech, a kind of vocal rhythm.*

The teacher-with-PowerPoint finds himself standing somewhat differently in relationship to his class: less dialogic, more monologic; less open to interruption and discussion, fastening to a vocal pattern that rhythmically signals oration not conversation. Vocal rhythm may also synchronize with slide rhythm.

*The arrival of a new slide is the occasion to take a breath, a momentary pause to look at the slide, allow its meaning to prompt me: a reminder of what to say next, what direction to pursue. But too, I must somehow find connection with what I have just said. Or not. It tells me what comes next. I feel I must press on.*

Like walking and talking with a good friend, footfalls – breath and slidefalls – find a mutually comfortable

rhythm and pace. Here a special kind of pathic relation is hosted, not between teacher and students, but between teacher and projected slides. This human-technology dialogue is apparently less mechanically complex and nuanced than the one taken up during the planning and design phase. The slide “speaks”, the teacher responds, and the next slide “speaks” again regardless of what the teacher says. Of course, this is most simply because the PowerPoint machinery does not respond to human voice, only to the deliberate tap of fingers on the keyboard, or the hand manipulating the mouse. More specifically, the slides are no longer in the midst of being created and manipulated. The teacher is now in “View Show” mode. In this mode, not only is the linear stream of the slides highly predictable, but the teacher also cannot now easily change the content of the slides themselves. He or she may only control the direction of movement between the slides and animation moments – forward, backward – as well as access preset links and buttons.

***“I am committed to do this PowerPoint”***

*As soon as I clicked to the next slide, I knew immediately it was the wrong thing. Seeing their eyes, I felt: I simply can't go on. It was the same sinking feeling you get realizing the person you are having a conversation with isn't listening to you. I had spent all this time preparing this PowerPoint presentation and then the problem with PowerPoint is you just can't simply jump ahead, be extemporaneous – “just ignore this and this while I find the right slide”. I was stuck with my plan.*

This college instructor recalls a time when he suddenly felt that, in the lived context of his class, his choice of using PowerPoint to address a particular topic was misjudged. Of course, any lesson plan or teaching approach can go awry or fall flat. In such moments, the teacher may decide either to “stick with the plan” or to diverge and improvise. The seasoned teacher usually has a few other “tricks” on hand. Yet, is there something about PowerPoint that complicates the move to diverge in response to one's felt sensibilities? One teacher describes her PowerPoint dilemma like this:

*PowerPoint is a finished product. It is hard for me to loosen myself from the slides in the context of my class. The story has, so to speak, already been decided.*

But, perhaps, the problem is precisely that the story had not been decided. The teacher did not prepare a story but a series of points, stops on the way to some

cognitive end point. She goes on to describe the resistance she feels in deviating from the slide set she herself has constructed: “If I answer a question, how will I go back to the slides?” In planning and carefully constructing the lecture beforehand, she tried to imagine her students there before her, tried to anticipate their questions. But now, in the context of her actual class, the world looks different.

*In the classroom, PowerPoint is a representation of anticipated presentation – an imagining of what my presentation would be, could be. But, in the actual moment of teaching, things are often otherwise. In the midst of teaching, my slides and I sometimes come into conflict with one another. Then I feel fragmented, forced to choose this particular outcome – what is represented up there on the slides – over the felt relation with my students – what seems to present itself to me in the moment. I am committed to do this PowerPoint. I cannot now easily choose to do something else.*

When a teacher uses PowerPoint in her classroom, she commits to the unfolding of a particular form of teaching and learning, a predetermined story wending its reckoned path to a decided conclusion. A PowerPoint presentation prepared beforehand is also an investment, visible proof of preparation and organization in the face of the contingent, indeterminate lifeworld of the classroom. To abandon such obvious evidence of competence may strike one as foolhardy, exposing oneself to an uncertain, unprepared-for future. As Howells (2007) laments:

*From the moment I walk into the lecture theatre I feel the pressure from my students to line up my thinking with their PowerPoint notes, without which they seem to be lost. I usually succumb by connecting them to the screen rather than to myself, each other, and the subject matter. In giving precedence to the object of PowerPoint, where the slides take on a language and world of their own, ... students may subconsciously be encouraged to zoom out of the teacher's presence in favour of the rectangle on the screen. (p. 139)*

The Times-Square-like surround of slick and easy possibilities is so appealing and omnipresent, our inner compass as teachers may be quietly lifted from us and replaced by the veneer of “powerful” solutions. As sociologist Daniel Bell prophetically wrote in the early 1970s, the new “intellectual

technologies” – tools that specifically extend our cognitive reach – substitute “algorithms (problem-solving rules) for intuitive judgments” (1973, p. 29). A digital technology is given proxy for professional knowing.

### **The Demand to “Have” the PowerPoint**

*On the first day of class, a student asks, “Will you be making your PowerPoint slides available?” I reply, “I haven’t yet read all of Plato’s dialogues, nor have I learned yet how to put slides up on the web. Given a choice between taking the time to read another dialogue and putting my PowerPoint files on the web, I think I’d choose the former.” At the back of the lecture hall, a young woman snaps her book shut, gathers her things and promptly leaves my classroom.*

The PowerPoint slide deck is a lecture product that students are increasingly expecting to procure from their teacher. In becoming a product, the teacher’s work may seem less a matter of developing pedagogic relations and the sharing of understanding, skill and expertise, and more a matter of commodity and consumption. Here the young woman expresses her disgruntlement that the new covenant of entitled student-consumer has been broken. She has nothing to gain from the philosopher in his person; only his PowerPoint serves her purposes.

*At a conference recently, where PowerPoint is the norm, I am speaking before a fairly large group. As I begin, I am surprised to notice someone, several rows back, raise a hand as if for a question. But then I see the hand is holding a camera, and it quickly goes back down again. Next slide. The same digital-camera-hand goes up then down, and now, off to my right, some ways back, I see another camera-touting hand shoot up. I feel taken aback. Surely my PowerPoint slides are not so compelling that each slide should warrant photographing. No: I, or rather, my work, is being consumed, commoditized and owned ... and all without my consent.*

Borgmann (1984) claims that modern technology is decisively separating means from ends. The activities or processes of creating things are progressively being hidden from view and replaced with the more singular activity of procuring end-products or commodities. “What distinguishes a [modern] device is its sharp internal division into a machinery and a commodity procured by that machinery” (p. 33). As a result,

some of the practices traditionally associated with creative teaching activities would ostensibly seem to be disappearing in the wake of sophisticated technologies.

As illustrated above, the PowerPoint slide deck is essentially a product of a teacher’s knowing and thinking in conversation with the PowerPoint software, now solidified in single framed, sequential snapshots. Thus, with PowerPoint, students witness more often the projected knowledge product, and less the teacher’s knowing-in-action. Then again, each slide has the potential to trigger the embodied insights of an experienced practitioner in the immediacy of the now. This *punctum* or evocative capacity can “save” a PowerPoint presentation from being merely a product.

Yet it may be that “the ultimate success of teaching actually may rely importantly on the ‘knowledge’ forms that inhere in practical actions, in an embodied thoughtfulness, and in the personal space, mood and relational atmosphere in which teachers find themselves with their students” (Van Manen, 1995, p. 48). Thus, a primary concern here is a bypassing of the experiential dimensions of practical knowledge, both in the discipline of the subject as well as in teaching practice. When educators try to capture and translate aspects of their tacit understandings into a series of slides, there is the danger of “short-circuiting” the normally contingent enactments of their ordinary teaching and professional actions. Of course, “shortening the circuit” is precisely what devices of expedience, like PowerPoint, are designed to do: eliminate “unnecessary” sub-steps (via hardware or software solutions) to allow for the most efficient path to an end.

### **Ready, Set, 143 Slides!**

*Not so long ago, I gave a lecture for a PowerPoint-loving colleague of mine who had to be away. Standing before his students, I opened his PowerPoint file on my laptop, the whole system struggling to cope with the gigantic file. While we are waiting, I tell his students that their professor has left me 143 slides to cover today. “That means,” I calculate, “one slide every 21 seconds. So we better hurry up and get started!”*

PowerPoint exhibits the possibility of, or certainly the desire for, maximum efficiency in teaching. Contemporary technologies are the product of, as well as the increasingly complex scaffold supporting and reifying, a particular technological frame of mind, “a mode of revealing” which Heidegger (1953/1977) calls “enframing” (*das Gestell*). In today’s ubiquitous

surround of technologies

we increasingly think and act in accordance with the world picture that [modern technology] provides . . . . The technological mode of revealing is a fixation of things by categorizing them and representing them to ourselves in thought through abstract categories, thus making them manageable and capable of being efficiently manipulated – a demand to which the fluid and the ill-defined remains inconveniently resistant . . . . We “enframe” things by turning them into instances – understanding them in terms of the objective properties attributed to members of the category to which they have been allocated. (Bonnett, 2002, p. 234).

This technological way of seeing things – wherein all things, including human beings, increasingly show up to us as resources to be enhanced and optimized for maximal efficiency – is radically restructuring our daily lives, along with contemporary learning experiences and teaching practices. To put it another way and perhaps a little more forcefully, post-modern technology engenders a totalizing style of practices that, according to Dreyfus and Spinoza (2003), threaten to “restrict our openness to people and things by driving out all other styles of practice that enable us to be receptive to reality. This threat is not a problem for which we must find a solution but an ontological condition that requires a transformation of our understanding of being. For that, we need to understand technicity as our current mode of revealing things and people” (p. 341).

## Conclusion

Composing a lesson in PowerPoint – that is, scribing in and subscribing to the presentation genre of corporate training – we convey to our students at school, and to our colleagues at meetings and conferences, a de-narrativized, technologized version, and often visually monotonous picture, of the world. PowerPoint sponsors a style of thinking and presenting, a normative framework for staging knowledge: headings and bullet points for teachers to “talk to”. This scaffolding of abbreviation, built into the software as default signage, implicitly signals to some teachers how they should visualize and subsequently present their knowledge in the lived space of the classroom. The PowerPoint slide presentation, regardless of the kind of knowledge it is serving to frame, exercises a powerful sway over the teacher in the moments of teaching, at times appearing as an impenetrable obstacle rather than a generative support to the teacher desiring to pursue

her pedagogical sense of tact.

Swearing off PowerPoint is not the answer. Indeed, we can no longer “turn off” PowerPoint in the larger, more meaningful sense. It has long since sunk into the forgotten, taken-for-granted, well-equipped background of our everyday teaching and learning experiences, occasionally resurfacing in unexpected places – a parent-teacher interview, a Dilbert cartoon, a church service – only to sink back once more into the silent fathoms of our digitally-textured lifeworld. However, this study points to a few other responses to the question of PowerPoint, and media technologies more generally. Educators must begin to:

1. Ask new, critical questions of each “fresh instrument” we welcome to our classroom: What forms of teaching practice might this technology encourage? What ways of knowing are privileged when this technology is used? What approaches to learning may tend to atrophy in its wake? What ways of being in the world are opened when this technology is in play? Which may be closed?
2. Attend to the silent languages technologies speak to us, to help discern what new ways of being, thinking and doing we are being invited to partake of when we take up this or that technology.
3. Articulate a *pedagogy of technology*, that is, a normative stance oriented by a concern for our students’ everyday lives and their futures, to help guide our selection and use of technologies in educative settings.

Educational technologies must no longer be viewed as neutral artefacts that may be added without significant hermeneutical and existential consequences to the lifeworld of the classroom. Technologies inexorably create new environments, scaffolding and supporting habituation to new ways of teaching and learning, knowing and being in the world.

We must, of course, continue to measure empirically the “effective” gains (such as test scores, instructor ratings, and so forth) that information and communication technologies may (or may not) afford students and teachers. Furthermore, we should also realistically weigh these gains relative to the huge fiscal commitments required to implement and sustain given technologies in educational institutions. But, importantly, we must also proceed from here with conscious regard for what comes with each new piece of software we introduce to the classroom. In this regard, it is vital that we take up our responsibility to problematize our unquestioned allegiance to digital

technologies in education and to critically evaluate each new technology in terms of its congruence with

sound pedagogy as well as with larger democratic concerns and ethical academic practices.

### About the Author



Catherine A. Adams is an Assistant Professor in the Faculty of Education at the University of Alberta in Edmonton, Canada. Her primary research interests concern the widespread integration of digital technologies in education. She has conducted hermeneutic phenomenological research in technology-enhanced classrooms as well as in online learning environments. Professor Adams continues to ground her investigations of educational technologies (e.g. Virtual Learning Environments, surveillance software, Interactive Whiteboards) in phenomenology, sometimes augmenting her inquiries with complementary qualitative research approaches and theoretical perspectives such as human environmental aesthetics and Actor-Network Theory, media ecology and critical media studies. She teaches a graduate course on the pedagogy of technology, as well as a doctoral seminar with Dr Max van Manen on hermeneutic phenomenological research and writing.

Catherine Adams can be contacted at: [caadams@ualberta.ca](mailto:caadams@ualberta.ca)

### References

- Arnold, M. (2003). On the phenomenology of technology: The “Janus-faces” of mobile phones. *Information and Organization*, 13(4), 231–256.
- Bell, D. (1973). *The coming of post-industrial society: A venture in social forecasting*. New York: Basic Books.
- Bleeker, H., & Mulderij, K. J. (2002). The experience of motor disability. *Phenomenology + Pedagogy*, 10, 1-18. Retrieved March 18, 2008, from <http://www.phenomenologyonline.com/articles/bleeker.html>
- Bonnett, M. (2002). Education as a form of the poetic: A Heideggerian approach to learning and the teacher-pupil relationship. In M.A. Peters (Ed.), *Heidegger, education and modernity* (pp. 229-243). Lanham, MD: Rowman & Littlefield.
- Borgmann, A. (1984). *Technology and the character of contemporary life: A philosophical inquiry*. Chicago, IL: University of Chicago Press.
- Clark, A. (2003). *Natural-born cyborgs: Mind, technologies, and the future of human intelligence*. Oxford, UK: Oxford University Press.
- Crang, M. (2003). The hair in the gate: Visuality and geographical knowledge. *Antipode*, 35(2), 238-243.
- Dreyfus, H. L., & Spinosa, C. (2003). Further reflections on Heidegger, technology, and the everyday. *Bulletin of Science, Technology and Society*, 23(5), 339–349.
- Gadamer, H. G. (1976). *Philosophical hermeneutics* (D. E. Linge, Ed. & Trans.). Berkeley, CA: University of California Press.
- Harman, G. (2007). *Heidegger explained: From phenomenon to thing*. Chicago, IL: Open Court.
- Heidegger, M. (1962) *Being and time* (J. Macquarrie & E. Robinson, Trans.). New York: Harper & Row. (Original work published 1927)
- Heidegger, M. (1971). *Poetry, language, and thought* (A. Hofstadter, Trans.). New York: Harper & Row.

- Heidegger, M. (1971a). Building Dwelling Thinking. In *Poetry, language, and thought* (A. Hofstadter, Trans.) (pp. 145-161). New York: Harper & Row. (Original work published 1951)
- Heidegger, M. (1971b). The Thing. In *Poetry, language, and thought* (A. Hofstadter, Trans.) (pp. 163-186). New York: Harper & Row. (Original work published 1949)
- Heidegger, M. (1972). *What is called thinking?* (F. D. Wieck & J. G. Grey, Trans.). New York: Harper & Row. (Original work published 1951)
- Heidegger, M. (1977). *The question concerning technology and other essays* (William Lovitt, Ed. & Trans.). New York: Harper & Row. (Original work published 1953)
- Howells, K. M. (2007). PowerPoint: Friend or foe? In V. A. Green & J. Sigafoos (Eds.), *Technology and teaching: A casebook for educators* (pp. 137-145). New York: Nova Science Publishers.
- Ihde, D. (1990). *Technology and the lifeworld: From garden to earth*. Bloomington, IN: Indiana University Press.
- Illich, I. (1996). Philosophy ... artifacts ... friendship – and the history of the gaze. In T.-A. Druart (Ed.), *Philosophy of technology: Proceedings of the American Catholic Philosophical Association, Vol. 70* (pp. 61-82). Washington, DC: National Office of the American Catholic Philosophical Association, Catholic University of America.
- Merleau-Ponty, M. (2002). *Phenomenology of perception* (C. Smith, Trans.). New York: Routledge. (Original work published 1945)
- Riding, J. (2005). St. Stephen's Chapel: From the crown to the people. *BBC history trails: Church and state*. Retrieved August 10, 2009, from [http://www.bbc.co.uk/history/trail/church\\_state/westminster\\_palace/st\\_stephens\\_chapel\\_09.shtml](http://www.bbc.co.uk/history/trail/church_state/westminster_palace/st_stephens_chapel_09.shtml)
- Rilke, R. M. (1977). *Duino Elegies and The Sonnets to Orpheus* (A. Poulin, Jr., Trans.). Boston, MA: Houghton Mifflin.
- Straus, E. W. (1966). *Phenomenological psychology*. New York: Basic Books.
- Suchman, L. A. (2007). *Human-machine reconfigurations: Plans and situated actions* (2nd ed.). New York: Cambridge University Press.
- The Churchill Centre (2005). Quotes and stories: Famous quotes and stories of Winston Churchill. Retrieved August 10, 2009, from <http://www.winstonchurchill.org/learn/speeches/quotations/famous-quotations-and-stories>
- Van Manen, M. (1984). Practicing phenomenological writing. *Phenomenology + Pedagogy*, 2(1), 36-69.
- Van Manen, M. (1995). On the epistemology of reflective practice. *Teachers and Teaching: Theory and Practice*, 1(1), 33-50.
- Van Manen, M. (1997). *Researching lived experience: Human science for an action sensitive pedagogy* (2nd ed.). London, ON: Althouse Press. (Original work published 1990)