Critical Pedagogy and Digital Praxis in the Humanities

Chris Friend
Chris Gilliard
Welcome to DHSI 2019!

Thanks for joining the DHSI community!

In this booklet, you will find essential course materials prefaced by some useful information about getting settled initially at UVic, finding your way around, getting logged in to our network (after you’ve registered the day before our courses begin), and so on.

Given our community’s focus on things computational, it will be a surprise to no one that we might expect additional information online for some of the classes - your instructors will let you know - or that the most current version of all DHSI-related information may be found on our website at dhsi.org.

Do check in there first if you need anything that’s not in this coursepak.

To access the DHSI wifi network, simply go into your wireless settings and connect to the “DHSI” network and enter the password “dhsi2019”.

And please don’t hesitate to be in touch with us at institut@uvic.ca or via Twitter at @AlyssaA_DHSI or @DHInstitute if we can be of any help ....
DHSI Wi-Fi

Network name: DHSI
Passkey: dhsi2019
The 2019 schedule is just taking shape nicely! A very few things to confirm, add, etc, still but this is the place to be to find out what is happening when / where ...

Sunday, 2 June 2019 [DHSI Registration + Suggested Outings]

If you’re here a day or two before we begin, or staying a day or two afterwards, here are a few ideas of things you might consider doing ....

Psst: Some Suggested Outings

Suggested Outing 1, Botanical Beach (self-organised; car needed)

A self-guided visit to the wet, wild west coast tidal shelf (and historically-significant former research site) at Botanical Beach: we recommend departing early (around 8.00 am) to catch low tide for a better view of the wonderful undersea life! Consider bringing a packed lunch to nibble-on while looking at the crashing waves when there, and then have an afternoon drink enjoying the view from the deck of the Port Renfrew Hotel.

Suggested Outing 2, Butchart Gardens (self-organised)

A shorter journey to the resplendently beautiful Butchart Gardens and, if you like, followed by (ahem) a few minutes at the nearby Church and State Winery, in the Saanich Peninsula. About an hour there by public bus from UVic, or 30 minutes by car.

Suggested Outing 3, SaltSpring Island (self-organised; a full day, car/bus + ferry combo)

Why not take a day to explore and celebrate the funky, laid back, Canadian gulf island lifestyle on SaltSpring Island. Ferry departs regularly from the Schwartz Bay ferry terminal, which is about one hour by bus / 30 minutes by car from UVic. You may decide to stay on forever ....

Suggested Outing 4, Paddling Victoria’s Inner Harbour (self-organised)

A shorter time, seeing Victoria’s beautiful city centre from the waterways that initially inspired its foundation. A great choice if the day is sunny and warm. Canoes, kayaks, and paddle boards are readily rented from Ocean River Adventures and conveniently launched from right behind the store. Very chill.

And more!

Self-organised High Tea at the Empress Hotel, scooter rentals, visit to the Royal BC Museum, darts at Christies Carriage House, a hangry breakfast at a local diner, whale watching, kayaking, brew pub sampling (at Spinnaker’s, Swans, Moon Under Water, and beyond!), paddle-boarding, a tour of used bookstores, and more have also been suggested!

Early Class Meeting: 4. [Foundations] DH For Department Chairs and Deans (David Strong Building C124, Classroom)

Further details are available from instructors in mid May to those registered in the class. Registration materials will be available in the classroom.

DHSI Registration (MacLaurin Building, Room A100)

After registration, many will wander to Cadboro Bay and the pub at Smuggler’s Cove OR the other direction to Shelbourne Plaza and Maude Hunter’s Pub OR even into the city for a nice meal.

Monday, 3 June 2019

Your hosts for the week are Alyssa Arbuckle, Ray Siemens, and Jannaya Friggstad Jensen.

Last-minute Registration (MacLaurin Building, Room A100)
### 8:30 to 10:00
- **Welcome, Orientation, and Instructor Overview** *(MacLaurin A144)*
  - Welcome to the Territory
  - Welcome to DHSI: Ray Siemens, Alyssa Arbuckle
  - Welcome from UVic: Jonathan Bengtson (University Librarian), Alexandra D’Arcy (Associate Dean Research, Humanities)

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<td>8:30 to 10:00</td>
<td>Classes in Session (click for details and locations)</td>
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<td>2. [Foundations] Introduction to Computation for Literary Criticism <em>(Clearihue A102)</em></td>
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<td>4. [Foundations] DH For Department Chairs and Deans <em>(David Strong Building C124, Classroom)</em></td>
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<td>5. [Foundations] Developing a Digital Project (With Omeka) <em>(Clearihue A031, Lab)</em></td>
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<td>9. Out-of-the-Box Text Analysis for the Digital Humanities <em>(Human and Social Development A160, Lab)</em></td>
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<td>10. Sound and Digital Humanities <em>(Cornett A120, Classroom)</em></td>
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<td>11. Critical Pedagogy and Digital Praxis in the Humanities <em>(Clearihue D132, Classroom)</em></td>
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<td>12. Digital Humanities for Japanese Culture: Resources and Methods <em>(McPherson Library A003, Classroom)</em></td>
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<td>15. Retro Machines &amp; Media <em>(McPherson Library 128, Classroom)</em></td>
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<td>17. Introduction to IIIF: Sharing, Consuming, and Annotating the World’s Images <em>(Cornett A121, Classroom)</em></td>
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<td>18. Web APIs with Python <em>(Human and Social Development A170, Lab)</em></td>
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<td>19. Ethical Data Visualization: Taming Treacherous Data <em>(Cornett A128, Classroom)</em></td>
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<td>20. Linked Open Data and the Semantic Web <em>(Cornett A132, Classroom)</em></td>
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<td>22. The Frontend: Modern JavaScript &amp; CSS Development <em>(Clearihue A030, Lab)</em></td>
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<td>25. Information Security for Digital Researchers <em>(David Strong Building C114, Classroom)</em></td>
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### 10:15 to Noon
- Lunch break / Unconference Coordination Session *(MacLaurin A144)*
  - (Grab a sandwich and come on down!)
  - Discussion topics, scheduling, and room assignments from among all DHSI rooms will be handled at this meeting.

### 12:15 to 1:15
- Classes in Session
- Lunch break / Unconference Coordination Session *(MacLaurin A144)*
- Discussion topics, scheduling, and room assignments from among all DHSI rooms will be handled at this meeting.

### 1:30 to 4:00
- Institute Lecture: Jacqueline Wernimont (Dartmouth C): "Sex and Numbers: Pleasure, Reproduction, and Digital Biopower"
  - Chair: Anne Cong-Huyen (U Michigan)
  - *(MacLaurin A144)*

### 4:10 to 5:00
- Abstract: Drawing from Numbered Lives (MIT 2018), this talk will consider a long history of sex-number entanglement in Anglo-American Cultures. Drawing on historical and contemporary objects and practices, Wernimont will ask "in what ways do theories of biopower, critical gender and critical race studies, and media studies" suggest that we can understand this set of entanglements and their impacts. NB: While relevant, this talk will not include discussions of sexual trauma or violence. It will include frank discussion of sex acts and various ways of translating sexual behavior into numbers.

### 5:00 to 6:00
- Opening Reception *(University Club)*

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**Tuesday, 4 June 2019**

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- DHSI Conference and Colloquium Lightning Talk Session 1 *(MacLaurin A144)*
Wednesday, 5 June 2019

9:00 to Noon

Classes in Session

12:15 to 1:15

Lunch break / Unconference

"Mystery" Lunches

Presentation: An Introduction to Scholarly Publishing with Manifold (MacLaurin A144)

Lunch included for those who register here.

This presentation introduces Manifold Scholarship, a Mellon-funded digital publishing platform developed by the CUNY Graduate Center, The University of Minnesota Press, and Cast Iron Coding. Manifold allows you to create beautiful, dynamic open access projects that can include text, images, video, embedded resources, and social annotation. We will provide an overview of Manifold and demonstrate how faculty, students and staff in the digital humanities can use Manifold to publish open access scholarly works, conduct and participate in peer review, and create custom edited versions of public domain course texts and OER.

1:30 to 4:00

Classes in Session

DHSI Conference and Colloquium Lightning Talk Session 2 (MacLaurin A144)

Chair: Kim O'Donnell (Simon Fraser U)

- Catherine Ryu (Michigan State U), "Tone Perfect: Developing a Multimodal Audio Database for Mandarin Chinese as an Open Source"
- Kenzie Burchell (U Toronto Scarborough), "Making Responsible Reporting Practices Visible: Comparing newswire coverage of humanitarian crises in Syria"
- Jessica Linzel (Brock U), "The Shopkeeper Aristocracy: Mapping Trade Networks in Colonial Niagara"
- Kirsten Painter (U Washington), "From Bogatyr to Bread: Digitization & Online Exhibition of Rare Russian Children's Books at the U Washington"
- John Barber (Washington State U), "A Mighty Span"

6:00 to 7:00

"Half Way There!" [An Informal, Self-Organized Birds of a Feather Get-Together] (Felicitas, Student Union Building)

Bring your DHSI nametag and enjoy your first tipple on us! [A great opportunity for an interest group meet-up ....]

Thursday, 6 June 2019

9:00 to Noon

Classes in Session

12:15 to 1:15

"Mystery" Lunches

[Instructor lunch meeting]

1:30 to 4:00

Classes in Session

DHSI Conference and Colloquium Lightning Talk Session 3 (MacLaurin A144)

Chair: Kim O'Donnell (Simon Fraser U)

- Colleen Kolba (U South Florida), "What Comics can Teach our Students about Multimodal Literacy"
- Trish Baer (ETCL; U Victoria), "Preserving Digital Legacies: Archived Websites and Digital Discoverability"
- Suchismita Dutta (U Miami), "The Importance of Archival Transcription for Genre Building"
- Jeffrey Lawler (California State U, Long Beach), "Twining our way through the Past: Video Game Authoring as History Pedagogy"
Friday, 7 June 2019 [DHSI; ADHO Pedagogy SIG Conference Opening]

9:00 to Noon
Classes in Session

12:15 to 1:15
Lunch Reception / Course E-Exhibits (MacLaurin A100)

1:30 to 1:50
Remarks, A Week in Review (MacLaurin A144)

2:00 to 3:00
Joint Institute Lecture (DHSI and ADHO Pedagogy SIG Conference):
Matt Gold (CUNY Graduate Center and Association for Computers and the Humanities): “Thinking Through DH: Proposals for Digital Humanities Pedagogy”
Chair: Diane Jakacki (Bucknell U)
(MacLaurin A144)

Abstract: How do we teach digital humanities, and how should DH be taught? What, indeed, should we teach when we teach DH? This talk will present a proposal for grounding digital humanities pedagogical practice in the research interests of our students and the epistemological foundations of our methods rather than through an approach grounded more central in data and methods.

3:30 to 5:00
Joint Reception: DHSI and ADHO Pedagogy SIG Conference (University Club)
E-Poetry Event (Chris Tanasescu)
Watch this space for details, including how to participate!

DHSI Conference and Colloquium Poster/Demo Session
- Pia Russel (U Victoria); Emily Streml (U Victoria), “British Columbia’s Historical Textbooks Digital Library”
- Cody Hennesy (U Minnesota); Rachael Samberg (U California, Berkeley); Stacy Reardon (U California, Berkeley), “Finding the Haystack: Literacies for Accessing and Using Text as Data”
- Paula Johanson (ETCL; Independent Scholar), “Proving Seahorses and Juan de Fuca’s Travels in The Curve of Time”
- Tara Baillargeon (Marquette U); Elizabeth Wawrzyniak (Marquette U), “FellowsHub: J. R. R. Tolkien Fanzine Portal”
- Caterina Agostini (Rutgers U), “Art at the Time of Syphilis: A First-Person Medical Narrative in Benvenuto Cellini’s Vita”
- Lauren Elle DeGaine (ETCL; U Victoria), “Women at the Front: A Digital Exhibit of Victorian Frontispiece Illustrations”
- Adam Griggs (Mercer U); Kathryn Wright (Mercer U); Christian Pham (Mercer U); Gail Morton (Mercer U); Stephanie Miranda (Mercer U), “Digitizing Middle Georgia’s History of Slavery”

Saturday, 8 June 2019 [Conference, Colloquium, and Workshop Sessions]

8:00 to 9:00
Conference / Workshop Registration (MacLaurin A100)

The day's events are included with your DHSI registration. If you're not registered in DHSI, you're very welcome to join us by registering here as a Conference / Colloquium / Workshop participant. We'll have a nametag waiting for you!

Coffee, Tea, &c?
Looking for some morning coffee or tea, or a small nibble? Options and hours of operation for weekend campus catering are available here. Mystic Market usually opens around 10.00.

9:00 to 4:00
DHSI Conference and Colloquium Sessions
ADHO Pedagogy SIG Conference Sessions
Right2Left Workshop Sessions

9:00 to 4:00
All Day DHSI Workshop Session (click for workshop details and free registration for DHSI participants)
- 55. Introduction to Machine Learning in the Digital Humanities [8-9 June; All day, each day] (David Strong Building C124, Classroom)

9:00 to 9:10
Informal Greetings, Room Set-up (Lobby, outside Hickman 105)

Session 1
DHSI Colloquium and Conference (Hickman 105)
Digital Humanities & Literature, Chair: Kim O'Donnell (Simon Fraser U)
- Youngmin Kim (Donggguk U), “Transdiscursivity in the Convergence of Digital Humanities and World Literature”
- Caroline Winter (U Victoria), “Digitizing Adam Smith's Literary Library”
- Kaitlyn Fralick (U Victoria); Kailey Fukushima (U Victoria); Sarah Karlson (U Victoria), “Victorian Poetry..."
### 9:10 to 10:30
**ADHO Pedagogy SIG Conference** *(Hickman 110)*
Chair: Katherine Faull (Bucknell U)
- Aaron Tucker and Nada Savicevic (Ryerson U), "Write Here, Right Now: An Open Source eTextbook for the Flipped Classroom"
- Heather McAlpine (U Fraser Valley), "Digital Meters: Using Text Encoding to Teach Literature in the Undergraduate Classroom"
- Tiina H. Airaksinen (U Helsinki), "Digital Humanities in Cultural Studies: Creating a MOOC course for University Students and A-Level Students"

**Right2Left Workshop** *(Hickman 116)*
Keynote - Nathan P. Gibson (Ludwig Maximilians U, München): "Thinking in #JTR: Reorienting the Directional Assumptions of Global Digital Scholarship"

### 10:30 to 10:40
**Break**

### 10:40 to Noon
**Session 2**

**DHSI Colloquium and Conference** *(Hickman 105)*
**Digital Humanities & Society, Chair: Eleanor Reed (Hastings C)**
- Joel Zapata (Southern Methodist U), "Uncovering the Southern Plains’ Mexican American Civil Rights Movement"
- Ayo Oaisanwo (U Ibadan), "Online Newspaper Construction of Agitation for the Sovereign State of Biafra in Nigeria"
- Joseph Jones (U British Columbia), "Testbed for an Approach to Distant Reading: Fictions That Represent Vietnam War Resisters in Canada"
- Brendan Mackie (U California, Berkeley), "Visualizing Long-Term Cultural Change: An Example From The Birth of Civil Society"

**ADHO Pedagogy SIG Conference** *(Hickman 110)*
Chair: Laura Estill (St Francis Xavier U)
- Jane Jackson (Chinese U of Hong Kong), "Interrogating digital spaces for intercultural meaning-making"
- Ryan Ikeda (UC Berkeley), "Disrupting Digital Literacy: Situating Electronic Literature Among Public Education Initiatives"
- Christopher Church, Katherine Hepworth (U Nevada, Reno), "We’re STEAMed! A call for balancing technical instruction and disciplinary content in the digital humanities"
- Chelsea Milbourne (Cal Poly, San Luis Obispo), "Finding the Right Fit between Technology and Class Content: Reflections on Including Web Development in a Digital Storytelling Course"

**Right2Left Workshop** *(Hickman 116)*
- Edward "Eddie" Surman (Claremont Graduate U), "Qualitative Digital Text Analysis and #Right2Left Languages: A Demonstration of Atlas.ti using the Hebrew Bible"

### Noon to 1:10
**Lunch** (We recommend Mystic Market on weekends!)

### 1:10 to 2:30
**Session 3**

**DHSI Colloquium and Conference** *(Hickman 105)*
**Digital Humanities & Community, Chair: Claire Carlin (U Victoria)**
- Pia Russel (U Victoria); Emily Stremel (U Victoria), "Mentorship and disability: Supporting disabled employees in digital humanities"
- Amy Lueck (Santa Clara U), "Virtually Emplacing Indigenous Memory"
- Md. Shehabul Alam (National U Bangladesh), "Integrating Library Service with Union Information and Service Center: A Joint Initiative towards Digital Bangladesh"
- Veronica Gomez (Instituto de Humanidades y Ciencias Sociales (HuCSo) - UNL-CONICET), "Latin American E-literature and Location: The Nation Revisited in Electronic Literature Organization (ELO)"

**ADHO Pedagogy SIG Conference** *(Hickman 110)*
Chair: Chris Tănăsescu (UC Louvain)
- Laura Estill (St Francis Xavier U), "One Assignment, Three Ways: Assessing DH Projects in a Literature Course"
- Felix Bayode Oke, Stella N. Kpolugbo (Anchor U Lagos), "The Multimodal Technique as a Pedagogical Tool in Pelu Awofeso’s White Lagos: A Definitive and Visual Guide to the Eyo Festival"
- Shu Wan (U Iowa), "A digital "historical gaze" of Chinese students in Iowa, 1911-1930"
- Francesca Giannetti (Rutgers U, New Brunswick), "So near while apart: Correspondence Editions as Critical Library Pedagogy and Digital Humanities Methodology"

**Right2Left Workshop** *(Hickman 116)*
- Najla Jarkas (American U Beirut) and David Joseph Wrisley (NYU Abu Dhabi), "RTL Software Localization and Digital Humanities: the Case Study of Translating Voyant Tools into Arabic"
2:30 to 2:40 Break

Session 4

DHSI Colloquium and Conference (Hickman 105)
Digital Humanities & Media, Chair: Caroline Winter (U Victoria)
- Ashleigh Cassmere-Stanfield (U Chicago), “Sonifying Hamlet and Reading the Room”

ADHO Pedagogy SIG Conference (Hickman 110)
Chair: Aaron Tucker (Ryerson U)
Youngmin Kim (Dongguk U), “Teaching Digital Humanities and World Literature in Class”
Alice Fleerackers, Juan Pablo Alperin, Esteban Morales, Remi Kalir (Simon Fraser U, U Colorado Denver), “Online annotations in the classroom: How, why, and what do students learn from annotating course material?”
Andie Silva (York C and Graduate Center, CUNY), “Keeping It Local: Undergraduate DH as Feminist Practice”

Right2Left Workshop (Hickman 116)
- Joanna Byszuk (Institute of Polish Language, Polish Academy of Sciences, Warsaw/Computational Stylistics Group) and Alexey Khismatulin (Institute of Oriental Manuscripts, Russian Academy of Sciences, Saint Petersburg), “Attribution of Authorship for Medieval Persian Quasidas with Stylometry”
- Ilan Benattar (New York U), “#Right2Left Biblical Translations in Jewish Textual History: Case Studies in Judeo-Arabic and Judeo-Spanish”

2:40 to 4:00

Sunday, 9 June 2019 [Workshop Sessions]

8:00 to 5:00
The day’s events are included with your DHSI registration. If you’re not registered in DHSI, you’re very welcome to join us by registering here as a Conference / Colloquium / Workshop participant. We’ll have a nametag waiting for you!

Coffee, Tea, &c?
Looking for some morning coffee or tea, or a small nibble? Options and hours of operation for weekend campus catering are available here. Mystic Market usually opens around 10:00.

9:00 to 1:00
DHSI Registration (MacLaurin Building, Room A100)

9:00 to 4:00
All Day Workshop Sessions (click for workshop details and free registration for DHSI participants)
- 55. Introduction to Machine Learning in the Digital Humanities [8-9 June; All day, each day] (David Strong Building C124, Classroom)
- 56. Pedagogy of the Digitally Oppressed: Anti-Colonial DH Methods and Praxis [9 June; All Day] (Hickman 116, Classroom)
- 57. Natural Language Processing and Network Coding Apps for Text & Textual Corpus Analysis in the Humanities [9 June; All Day] (David Strong Building C114, Classroom)

9:00 to Noon
AM Workshop Sessions (click for workshop details and free registration for DHSI participants)
- 59. 3D Visualization for the Humanities [9 June; AM] (Cornett A229, Classroom)
- 60. It’s All Relational: AbTeC’s Indigenous Video Game Workshops as Storytelling Praxis [9 June; AM] (Cornett A121, Classroom)
- 61. Spatial DH: De-Colonizing Cultural Territories Online [9 June; AM] (Clearihue D130, Classroom)
- 63. Creating a CV for Digital Humanities Makers [9 June; AM] (David Strong Building C108, Classroom)

Noon to 1:00
Lunch (We recommend Mystic Market on weekends!)

1:00 to 4:00
PM Workshop Sessions (click for workshop details and free registration for DHSI participants)
- 65. Indigenous Futures in the Classroom and Beyond [9 June; PM] (Cornett A121, Classroom)
- 66. DHSI Knits: History of Textiles and Technology [9 June; PM] (Fine Arts 109, Classroom)
- 68. Linked Open Datafication for Humanities Scholars [9 June; PM] (McPherson Library A003, Classroom)
- 69. Stylo - WYSIWYM Text Editor for Humanities Scholars [9 June; PM] (McPherson Library A025, Classroom)

After the day, many will wander to Cadboro Bay and the pub at Smuggler’s Cove OR the other direction to Shelbourne Plaza and Maude Hunter’s Pub OR even into the city for a bite to eat.

Monday, 10 June 2019
Your hosts for the week are Ray Siemens and Jannaya Friggstad Jensen.

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<td>DHSI Last-minute Registration (<a href="#">MacLaurin A100</a>)</td>
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<td>- 30. [Foundations] Databases for Digital Humanists (<a href="#">McPherson Library 210, Classroom</a>)</td>
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<td>- 33. Digital Storytelling (<a href="#">Cornett A120, Classroom</a>)</td>
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<td>- 34. Text Mapping as Modelling (<a href="#">Cleanihue D131, Classroom</a>)</td>
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<td>- 35. Styloometry with R: Computer-Assisted Analysis of Literary Texts (<a href="#">Cleanihue A102, Lab</a>)</td>
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<td>- 36. Open Access and Open Social Scholarship (<a href="#">Cleanihue D130, Classroom</a>)</td>
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<td>- 37. Digital Games as Tools for Scholarly Research, Communication and Pedagogy (<a href="#">Cornett A229, Classroom</a>)</td>
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<td>12:15 to 1:15</td>
<td>Lunch break / Unconference Coordination Session (<a href="#">MacLaurin A144</a>) (Grab a sandwich and come on down!)</td>
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<td>4:10 to 5:00</td>
<td>Institute Lecture: Angel David Nieves (San Diego State U): &quot;3D Mapping and Forensic Traces of Testimony: Documenting Apartheid-Era Crimes Through the Digital Humanities&quot; Chair: Constante Crompton (U Ottawa) (<a href="#">MacLaurin A144</a>)</td>
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<td>Abstract: In 1989 the killing of a queer, 14-year-old youth in Winnie Mandela’s house named Stompie Seipei (an event that few in South Africa are willing to recall, let alone discuss, in any detail) -- is perhaps one of the most glaring examples where the queer and activist community was suppressed or erased from anti-apartheid/liberation histories. Digital humanities may actually help both reconstruct and recover a history that is still very early in the telling, despite what is commonly believed about the liberation struggle and the contributions of queer activists in the dismantling of apartheid. Perhaps it could explain why a youth such as Seipei was killed -- or at the very least, provide a more complex and messy narrative that permits one to know more how the history of queer anti-apartheid activists was suppressed. This talk outlines a methodology for &quot;messy thinking and writing&quot; in the digital humanities that -- through a queer and feminist intersectional framework -- permits a more complex layering of oral histories and 3D historical reconstructions.</td>
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<td>&quot;Mystery&quot; Lunches</td>
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Tuesday, 11 June 2019
### Wednesday, 12 June 2019

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| 4:15 to 5:15 | DHSI Conference and Colloquium Lightning Talk Session 4            (MacLaurin A144)  
Chair: Lindsey Seatter (U Victoria)  
- Ashley Caranto Morford (U Toronto); Kush Patel (U Michigan); Arun Jacob (McMaster U), "#OurDHIs anti-colonial: Questions and challenges in dismantling colonial influences in digital humanities pedagogy"  
- Julia King (U Bergen), "Developing Network Visualizations of Syon Abbey's Books, 1415-1539"  
- Luis Meneses (ETCL; U Victoria), "Identifying Changes in the Political Environment in Ecuador"  
- Alicia Brown (Texas Christian U), "Digital Cartography of the Ancient World"  
- Laura Horak (Carleton U), "Building the Transgender Media Portal"  
- Andrew Boyles Peterson (Michigan State U), "Last Mile Tracking: Implications of Rental Scooter Surveillance" |
| 6:00 to 8:00 | DHSI Newcomer's Gathering (Grad House Restaurant, Graduate Student Centre)  
Come down, buy meal and a beverage, and make some new friends! |
| 9:00 to Noon | Classes in Session                                                   |
| 12:15 to 1:15 | Lunch break / Unconference                                           |
|              | "Mystery" Lunches                                                    |
|              | Presentation: An Introduction Jupyter Notebooks for Researchers (MacLaurin A144)  
This presentation introduces Jupyter Notebooks for researchers, via a partnership between Compute Canada and the Pacific Institute for the Mathematical Sciences (PIMS) including a large number of Canadian institutions. Read more here. Presenting is James Colliander, PIMS Director and team. |
| 1:30 to 4:00 | Classes in Session                                                   |
| 4:10 to 5:00 | Institute Lecture: Karina van Dalen-Oskam (Huygens Institute and U Amsterdam; Alliance of Digital Humanities Organizations): "The Riddle of Literary Quality: Some Answers"  
Chair: Aaron Mauro (Penn State, Behrend C) (MacLaurin A144)  
Abstract: What is literature, and can you measure it? That is the key question of the project The Riddle of Literary Quality. "The Riddle" is a research project of the Huygens Institute for the History of the Netherlands (Amsterdam) in collaboration with the Fryeke Akademy (Leeuwarden) and the Institute for Logic, Language and Computation (University of Amsterdam). The Riddle combines computational analysis of writing style with the results of a large online survey of readers, completed by almost 14,000 participants. In my talk, I will go into ... |

### Thursday, 13 June 2019

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some of the main results of the project.

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<td>Closing, DHSI in Review (MacLaurin A144)</td>
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Critical Pedagogy and Digital Praxis in the Humanities

DHSI 2019 — Instructors: Chris Friend and Chris Gilliard

Live version of this document available at bit.ly/critprax2019doc.
Slides used in this course available at bit.ly/critprax2019slides.

Course Description
This course will focus on building community in collaborative digital learning environments and will interrogate notions of outcomes, best practices, and instructional design. Our work together will be productive, grounded in praxis, and driven by learner experiences.

Digital Humanities, with its deep reliance on technological tools, is replete with courses about those tools. This course offers an alternative: It is an exploration of pedagogy, challenging teachers to rethink how they approach their classes and interact with their students. We will discuss critical pedagogy and the importance of letting students define, control, and take responsibility for, their learning environment. This course will also serve as a playground, letting participants experiment with critical digital pedagogy in a class-created open-access online course that we co-design, build, deploy, promote, and assess, all within the one-week seminar. Participants will leave with a better understanding of their approaches to teaching and how critical digital pedagogy applies to DH courses, and the course will conclude with the creation of a multimodal teaching philosophy re-shaped by the conversations of the week.

The Instructors

Chris Friend (Saint Leo U) is Assistant Professor of English in the Department of Language Studies and the Arts. He is also the Director of Hybrid Pedagogy and the producer of its podcast, the HybridPod. He holds a PhD in Texts & Technology from the University of Central Florida. His research works to define hybridity and collaboration in education, with particular attention to their influence in first-year composition courses. He tweets as @chris_friend, and his personal website is chrisfriend.us.

Chris Gilliard (Macomb CC) is a professor, speaker, and writer whose work on privacy, surveillance, facial recognition, and digital redlining has been featured in Motherboard, Real Life Magazine, EDUCAUSE Review, and the Chronicle of Higher Education. He tweets often as @hypervisible and his personal website is hypervisible.com.

Daily Overview
Each day will include discussion of a reading and the issues it raises, experimentation with one or more tools, and collaborative project work. Our agenda for each day will include:

1. Philosophy of Critical Digital Pedagogy (CDP)
   a. Guiding questions
i. What is CDP and what are its goals?
ii. Why implement CDP, especially digitally?
iii. What tools help create, deliver, promote, and maintain open courses?

b. Activities
i. Housekeeping: Schedule/lunch/unconference logistics; course hashtag (#critprax); statement on ethics & inclusion
ii. Teaching Philosophy sketch
iii. Introductions via vulnerability

To discuss after lunch:

i. Mini lecture: Critical Digital Pedagogy (Friend)
ii. Highlights of bell hooks
iii. Content warnings & pedagogy
iv. Brainstorm: Topic & structure of constructed course
   1. Make groups for course modules/units/whatevers
   2. Group for syllabus/assignment builders?

2. Pedagogy as Praxis
   a. Guiding questions
      i. How do we build with CDP in mind?
      ii. How does CDP inform praxis? Where are the trouble spots?
      iii. Brainstorm an open course: What principles guide its design?
   b. Activities
      i. Mini-lecture: Consent, Control, and Privacy (Gilliard)
      ii. In groups: What is a course? (Serious question.)
      iii. Build a set of ethical principles for building online courses that use CDP (consider this Students’ Bill of Rights for a precedent)
      iv. Decide: Platform & intent of constructed course
      v. Work session: Build course content, assignment, or syllabus

3. Designing Learning with CDP
   a. Guiding questions
      i. How do we form outcomes for online courses?
      ii. Whose voices contribute to the design of our courses?
   b. Activities
      i. Mini-lecture: Access (Gilliard)
      ii. Critically evaluating digital tools
      iii. Start building our open course

4. (Meta-)Assessing (with) CDP
   a. Guiding questions
      i. How does assessment change when CDP is the focus?
      ii. What assessments (or tools) work? How will we assess this week?
      iii. Wrap up course development
   b. Activities:
      i. Mini-lecture: Assessment (Friend)
      ii. Group work sessions to build course content
 iii. Guest lectures, as determined during the week

5. Deploying CDP
   a. Morning group work session; finalize course content
   b. Launch the course
   c. Solicit engagement; marketing blast
   d. Witness the chaos/fun

Readings for Discussion

Day 1—Human(e) Pedagogies
Seymour Papert, The Children’s Machine: Chapter 4, “Teachers”
Recommended: bell hooks, Teaching to Transgress: Chapter 1, “Engaged Pedagogy”
Recommended: Paulo Freire, Pedagogy of the Oppressed: Chapter 2

Day 2—Technologies of Learning
Woodrow Hartzog, “The Case Against Idealising Control”
Sean Michael Morris, “A Call for Critical Instructional Design”
Recommended: Howard Rheingold, “Net Smart: Introduction”
Recommended: Adeline Koh, “Introducing Digital Humanities Work to Undergraduates: an Overview”

Day 3—Design
Chris Gilliard, “Pedagogy and the Logic of Platforms” or HybridPod Ep. 14, “Platforms”
Recommended: Audrey Watters, “The Web We Need to Give Students”
Recommended: Jesse Stommel, “How To Build an Ethical Online Course”

Day 4—Assessment
Peter Elbow, “Ranking, Evaluating, and Liking: Sorting out Three Forms of Judgment”
Recommended: Chris Friend, Maha Bali, and Asao B. Inoue, “Compassion”
Recommended: Cathy N. Davidson, “Crowdsourcing Grading: Follow-Up”

Our syllabus, readings, resources, etc. will evolve dynamically and collaboratively over the course of the week.
Engaged Pedagogy

To educate as the practice of freedom is a way of teaching that anyone can learn. That learning process comes easiest to those of us who teach who also believe that there is an aspect of our vocation that is sacred, who believe that our work is not merely to share information but to share in the intellectual and spiritual growth of our students. To teach in a manner that respects and cares for the souls of our students is essential if we are to provide the necessary conditions where learning can most deeply and intimately begin.

Throughout my years as student and professor, I have been most inspired by those teachers who have had the courage to transgress those boundaries that would confine each pupil to a rote, assembly-line approach to learning. Such teachers approach students with the will and desire to respond to our unique beings, even if the situation does not allow the full emergence of a relationship based on mutual recognition. Yet the possibility of such recognition is always present.
Paulo Freire and the Vietnamese Buddhist monk Thich Nhat Hanh are two of the "teachers" who have touched me deeply with their work. When I first began college, Freire's thought gave me the support I needed to challenge the "banking system" of education, that approach to learning that is rooted in the notion that all students need to do is consume information fed to them by a professor and be able to memorize and store it. Early on, it was Freire's insistence that education could be the practice of freedom that encouraged me to create strategies for what he called "conscientization" in the classroom. Translating that term to critical awareness and engagement, I entered the classrooms with the conviction that it was crucial for me and every other student to be an active participant, not a passive consumer. Education as the practice of freedom was continually undermined by professors who were actively hostile to the notion of student participation. Freire's work affirmed that education can only be liberatory when everyone claims knowledge as a field in which we all labor. That notion of mutual labor was affirmed by Thich Nhat Hanh's philosophy of engaged Buddhism, the focus on practice in conjunction with contemplation. His philosophy was similar to Freire's emphasis on "praxis"—action and reflection upon the world in order to change it.

In his work Thich Nhat Hanh always speaks of the teacher as a healer. Like Freire, his approach to knowledge called on students to be active participants, to link awareness with practice. Whereas Freire was primarily concerned with the mind, Thich Nhat Hanh offered a way of thinking about pedagogy which emphasized wholeness, a union of mind, body, and spirit. His focus on a holistic approach to learning and spiritual practice enabled me to overcome years of socialization that had taught me to believe a classroom was diminished if students and professors regarded one another as "whole" human
being, striving not just for knowledge in books, but knowledge about how to live in the world.

During my twenty years of teaching, I have witnessed a grave sense of dis-ease among professors (irrespective of their politics) when students want us to see them as whole human beings with complex lives and experiences rather than simply as seekers after compartmentalized bits of knowledge. When I was an undergraduate, Women’s Studies was just finding a place in the academy. Those classrooms were the one space where teachers were willing to acknowledge a connection between ideas learned in university settings and those learned in life practices. And, despite those times when students abused that freedom in the classroom by only wanting to dwell on personal experience, feminist classrooms were, on the whole, one location where I witnessed professors striving to create participatory spaces for the sharing of knowledge. Nowadays, most women’s studies professors are not as committed to exploring new pedagogical strategies. Despite this shift, many students still seek to enter feminist classrooms because they continue to believe that there, more than in any other place in the academy, they will have an opportunity to experience education as the practice of freedom.

Progressive, holistic education, “engaged pedagogy” is more demanding than conventional critical or feminist pedagogy. For, unlike these two teaching practices, it emphasizes well-being. That means that teachers must be actively committed to a process of self-actualization that promotes their own well-being if they are to teach in a manner that empowers students. Thich Nhat Hanh emphasized that “the practice of a healer, therapist, teacher or any helping professional should be directed toward his or herself first, because if the helper is unhappy, he or she cannot help many people.” In the United States it is rare that anyone talks about teachers in university settings as
healers. And it is even more rare to hear anyone suggest that teachers have any responsibility to be self-actualized individuals.

Learning about the work of intellectuals and academics primarily from nineteenth-century fiction and nonfiction during my pre-college years, I was certain that the task for those of us who chose this vocation was to be holistically questing for self-actualization. It was the actual experience of college that disrupted this image. It was there that I was made to feel as though I was terribly naive about "the profession." I learned that far from being self-actualized, the university was seen more as a haven for those who are smart in book knowledge but who might be otherwise unfit for social interaction. Luckily, during my undergraduate years I began to make a distinction between the practice of being an intellectual/teacher and one's role as a member of the academic profession.

It was difficult to maintain fidelity to the idea of the intellectual as someone who sought to be whole—well-grounded in a context where there was little emphasis on spiritual well-being, on care of the soul. Indeed, the objectification of the teacher within bourgeois educational structures seemed to denigrate notions of wholeness and uphold the idea of a mind/body split, one that promotes and supports compartmentalization.

This support reinforces the dualistic separation of public and private, encouraging teachers and students to see no connection between life practices, habits of being, and the roles of professors. The idea of the intellectual questing for a union of mind, body, and spirit had been replaced with notions that being smart meant that one was inherently emotionally unstable and that the best in oneself emerged in one's academic work. This meant that whether academics were drug addicts, alcoholics, batters, or sexual abusers, the only important aspect of our identity was whether or not our minds functioned, whether we were able to do our jobs in the classroom. The self was presumably emptied out the moment the thresh-
old was crossed, leaving in place only an objective mind—free of experiences and biases. There was fear that the conditions of that self would interfere with the teaching process. Part of the luxury and privilege of the role of teacher/professor today is the absence of any requirement that we be self-actualized. Not surprisingly, professors who are not concerned with inner well-being are the most threatened by the demand on the part of students for liberatory education, for pedagogical processes that will aid them in their own struggle for self-actualization.

Certainly it was naive for me to imagine during high school that I would find spiritual and intellectual guidance in university settings from writers, thinkers, scholars. To have found this would have been to stumble across a rare treasure. I learned, along with other students, to consider myself fortunate if I found an interesting professor who talked in a compelling way. Most of my professors were not the slightest bit interested in enlightenment. More than anything they seemed entrapped by the exercise of power and authority within their mini-kingdoms, the classroom.

This is not to say that there were not compelling, benevolent dictators, but it is true to my memory that it was rare—absolutely, astonishingly rare—to encounter professors who were deeply committed to progressive pedagogical practices. I was dismayed by this; most of my professors were not individuals whose teaching styles I wanted to emulate.

My commitments to learning kept me attending classes. Yet, even so, because I did not conform—would not be an unquestioning, passive student—some professors treated me with contempt. I was slowly becoming estranged from education. Finding Freire in the midst of that estrangement was crucial to my survival as a student. His work offered both a way for me to understand the limitations of the type of education I was receiving and to discover alternative strategies for learning and teaching. It was particularly disappointing to encounter white
male professors who claimed to follow Freire's model even as their pedagogical practices were colored in structures of domination, mirroring the styles of conservative professors even as they approached subjects from a more progressive standpoint.

When I first encountered Paulo Freire, I was eager to see if his style of teaching would embody the pedagogical practices he described so eloquently in his work. During the short time I studied with him, I was deeply moved by his presence, by the way in which his manner of teaching exemplified his pedagogical theory. (Not all students interested in Freire have had a similar experience.) My experience with him restored my faith in liberatory education. I had never wanted to surrender the conviction that one could teach without reinforcing existing systems of domination. I needed to know that professors did not have to be dictators in the classroom.

While I wanted teaching to be my career, I believed that personal success was intimately linked with self-actualization. My passion for this quest led me to interrogate constantly the mind/body split that was so often taken to be a given. Most professors were often deeply antagonistic toward, even fearful of, any approach to learning emerging from a philosophical standpoint emphasizing the union of mind, body, and spirit, rather than the separation of these elements. Like many of the students I now teach, I was often told by powerful academics that I was misguided to seek such a perspective in the academy. Throughout my academic years I felt deep inner anguish. Memory of that pain returns as I listen to students express the concern that they will not succeed in academic professions if they want to be well, if they eschew dysfunctional behavior or participation in coercive hierarchies. These students are often fearful, as I was, that there are no spaces in the academy where the will to be self-actualized can be affirmed.

This fear is present because many professors have intensely hostile responses to the vision of liberatory education that con-
nects the will to know with the will to become. Within profes-
sors' circles, individuals often complain bitterly that students
want classes to be "enounter groups." While it is utterly unre-
asonable for students to expect classrooms to be therapy ses-
sions, it is appropriate for them to hope that the knowledge
received in these settings will enrich and enhance them.
Currently, the students I encounter seem far more uncer-
tain about the project of self-actualization than my peers and I
were twenty years ago. They feel that there are no clear ethical
guidelines shaping actions. Yet, while they despair, they are also
adherent that education should be liberatory. They want and
demand more from professors than my generation did. There
are times when I walk into classrooms, overflowing with students
who feel terribly wounded in their psyches (many of them see
therapists), yet I do not think that they want therapy from me.
They do want an education that is healing to the uninformed,
unknowing spirit. They do want knowledge that is meaningful.
They rightfully expect that my colleagues and I will not offer
them information without addressing the connection between
what they are learning and their overall life experiences.
This demand on the students' part does not mean that they
will always accept our guidance. This is one of the joys of educa-
tion as the practice of freedom, for it allows students to assume
responsibility for their choices. Writing about our teacher/stu-
dent relationship is a piece for the Village Voice, "How to Run the
Yard: Off-Line and into the Margins at Yale," one of my students,
Gary Dauphin, shares the joy of working with me as well as the
tension that surfaced between us as he began to devote his time
doing a fraternity rather than cultivating his writing.
People think academics like Gloria [my given name] are all about difference; but what I learned from her
was mostly about oneness, about what I had in com-
mon as a black man to people of color; to women and
gays and lesbians and the poor and anyone else who
wished in. I did some of this learning by reading but most of it came from hanging out on the fringes of her life. I lived like that for a while, shuttling between high points in my classes and low points outside. Gloria was a safe haven... Pledging a fraternity is about as far away as you can get from her classroom, from the yellow kitchen where she used to share her lunch with students in need of various forms of sustenance.

This is Gary writing about the joy. The tension arose as we discussed his reason for wanting to join a fraternity and my disapproval for that decision. Gary comments, "They represented a vision of black manhood that she abhorred, one where violence and abuse were primary ciphers of bonding and identity." Describing his assertion of autonomy from my influence he writes, "But she must have also known the limits of even her influence on my life, the limits of books and teachers."

Ultimately, Gary felt that the decision he had made to join a fraternity was not constructive, that I "had taught him openness" where the fraternity had encouraged one-dimensional allegiance. Our interchange both during and after this experience was an example of engaged pedagogy.

Through critical thinking—a process he learned by reading theory and actively analyzing texts—Gary experienced education as the practice of freedom. His final comments about me: "Gloria had only mentioned the entire episode once after it was over, and this to tell me simply that there are many kinds of choices, many kinds of logic, I could make those even mean whatever I wanted as long as I was honest." I have quoted his writing at length because it is testimony affirming engaged pedagogy. It means that my voice is not the only account of what happens in the classroom.

Engaged pedagogy necessarily values student expression. In her essay, "Interrupting the Calls for Student Voice is Libera-
Engaged Pedagogy: A Feminist Poststructuralist Perspective," Mimi Orner employs a Foucauldian framework to suggest that regulatory and punitive practices and the confession bring to mind curricular and pedagogical practices which call for students to publicly reveal, even confess, information about their lives and cultures in the presence of authority figures such as teachers.

When education is the practice of freedom, students are not the only ones who are asked to share, to confess. Engaged pedagogy does not seek simply to empower students. Any classroom that employs a holistic model of learning will also be a place where teachers grow, and are empowered by the process. That empowerment cannot happen if we refuse to be vulnerable while encouraging students to take risks. Professors who expect students to share confessional narratives but who are themselves unwilling to share are exercising power in a manner that could be coercive. In my classrooms, I do not expect students to take any risks that I would not take, to share in any way that I would not share. When professors bring narratives of their experiences into classroom discussions it eliminates the possibility that we can function as all-knowing, silent interrogators. It is often productive if professors take the first risk, linking confessional narratives to academic discussions so as to show how experience can illuminate and enhance our understanding of academic material. But most professors must practice being vulnerable in the classroom, being wholly present in mind, body, and spirit.

Progressive professors working to transform the curriculum so that it does not reflect biases or reinforce systems of domination are most often the individuals willing to take the risks that engaged pedagogy requires and to make their teaching practices a site of resistance. In her essay, "On Race and Voice:
Challenges for Liberation Education in the 1990s," Chandra Mohanty writes that

resistance lies in self-conscious engagement with dominant, normative discourses and representations and in the active creation of oppositional analytic and cultural spaces. Resistance that is random and isolated is clearly not as effective as that which is mobilized through systemic politicized practices of teaching and learning. Uncovering and reclaiming subjugated knowledge is one way to lay claims to alternative histories. But these knowledges need to be understood and defined pedagogically, as questions of strategy and practice as well as of scholarship, in order to transform educational institutions radically.

Professors who embrace the challenge of self-actualization will be better able to create pedagogical practices that engage students, providing them with ways of knowing that enhance their capacity to live fully and deeply.
A careful analysis of the teacher-student relationship at any level, inside or outside the school, reveals its fundamentally narrative character. This relationship involves a narrating Subject (the teacher) and patient listening objects (the students). The contents, whether values or empirical dimensions of reality, tend in the process of being narrated to become lifeless and petrified. Education is suffering from narration sickness.

The teacher talks about reality as if it were motionless, static, compartmentalized, and predictable. Or else he expounds on a topic completely alien to the existential experience of the students. His task is to "fill" the students with the contents of his narration -- contents which are detached from reality, disconnected from the totality that engendered them and could give them significance. Words are emptied of their concreteness and become a hollow, alienated, and alienating verbosity.

The outstanding characteristic of this narrative education, then, is the sonority of words, not their transforming power. "Four times four is sixteen; the capital of Para is Belem." The student records, memorizes, and repeats these phrases without perceiving what four times four really means, or realizing the true significance of "capital" in the affirmation "the capital of Para is Belem," that is, what Belem means for Para and what Para means for Brazil.

Narration (with the teacher as narrator) leads the students to memorize mechanically the narrated account. Worse yet, it turns them into "containers," into "receptacles" to be "filled" by the teachers. The more completely she fills the receptacles, the better a teachers she is. The more meekly the receptacles permit themselves to be filled, the better students they are.

Education thus becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of communicating, the teacher issues communiques and makes deposits which the students patiently receive, memorize, and repeat. This is the 'banking' concept of education, in which the scope of action allowed to the students extends only as far as receiving, filing, and storing the deposits. They do, it is true, have the opportunity to become collectors or cataloguers of the things they store. But in the last analysis, it is the people themselves who are filed away through the lack of creativity, transformation, and knowledge in this (at best) misguided system. For apart from inquiry, apart from the praxis, individuals cannot be truly human. Knowledge emerges only through invention and re-invention, through the restless, impatient continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other.

In the banking concept of education, knowledge is a gift bestowed by those who consider themselves knowledgeable upon those whom they consider to know nothing. Projecting an absolute ignorance onto others, a characteristic of the ideology of oppression, negates education and knowledge as processes of inquiry. The teacher presents himself to his students as their necessary opposite; by considering their ignorance absolute, he justifies his own existence. The students, alienated like the slave in the Hegelian dialectic, accept their ignorance as justifying the teachers existence -- but unlike the slave, they never discover that they educate the teacher.

The raison d'etre of libertarian education, on the other hand, lies in its drive towards reconciliation. Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction.
so that both are simultaneously teachers and students.

This solution is not (nor can it be) found in the banking concept. On the contrary, banking education maintains and even stimulates the contradiction through the following attitudes and practices, which mirror oppressive society as a whole:

- the teacher teaches and the students are taught;
- the teacher knows everything and the students know nothing;
- the teacher thinks and the students are thought about;
- the teacher talks and the students listen -- meekly;
- the teacher disciplines and the students are disciplined;
- the teacher chooses and enforces his choice, and the students comply;
- the teacher acts and the students have the illusion of acting through the action of the teacher;
- the teacher chooses the program content, and the students (who were not consulted) adapt to it;
- the teacher confuses the authority of knowledge with his or her own professional authority, which she and he sets in opposition to the freedom of the students;
- the teacher is the Subject of the learning process, while the pupils are mere objects.

It is not surprising that the banking concept of education regards men as adaptable, manageable beings. The more students work at storing the deposits entrusted to them, the less they develop the critical consciousness which would result from their intervention in the world as transformers of that world. The more completely they accept the passive role imposed on them, the more they tend simply to adapt to the world as it is and to the fragmented view of reality deposited in them.

The capability of banking education to minimize or annul the student's creative power and to stimulate their credulity serves the interests of the oppressors, who care neither to have the world revealed nor to see it transformed. The oppressors use their "humanitarianism" to preserve a profitable situation. Thus they react almost instinctively against any experiment in education which stimulates the critical faculties and is not content with a partial view of reality always seeks out the ties which link one point to another and one problem to another.

Indeed, the interests of the oppressors lie in "changing the consciousness of the oppressed, not the situation which oppresses them," (1) for the more the oppressed can be led to adapt to that situation, the more easily they can be dominated. To achieve this the oppressors use the banking concept of education in conjunction with a paternalistic social action apparatus, within which the oppressed receive the euphemistic title of "welfare recipients." They are treated as individual cases, as marginal persons who deviate from the general configuration of a "good, organized and just" society. The oppressed are regarded as the pathology of the healthy society which must therefore adjust these "incompetent and lazy" folk to its own patterns by changing their mentality. These marginals need to be "integrated," "incorporated" into the healthy society that they have "forsaken."

[Footnote #1: Simone de Beauvoir. La Pensee de Droite, Aujourd'hui (Paris); ST, El Pensamiento politico de la Derecha (Buenos Aires, 1963), p. 34.

The truth is, however, that the oppressed are not "marginals," are not living "outside" society. They have always been "inside" the structure which made them "beings for others." The solution is not to 'integrate" them into the structure of oppression, but to transform that structure so that they can become "beings for themselves." Such transformation, of course, would undermine the oppressors' purposes; hence their utilization of the banking concept of education to avoid the threat of student conscientizacao.

The banking approach to adult education, for example, will never propose to students that they critically
consider reality. It will deal instead with such vital questions as whether Roger gave green grass to the goat, and insist upon the importance of learning that, on the contrary, Roger gave green grass to the rabbit. The "humanism" of the banking approach masks the effort to turn women and men into automatons -- the very negation of their ontological vocation to be more fully human.

Those who use the banking approach, knowingly or unknowingly (for there are innumerable well-intentioned bank-clerk teachers who do not realize that they are serving only to dehumanize), fail to perceive that the deposits themselves contain contradictions about reality. But sooner or later, these contradictions may lead formerly passive students to turn against their domestication and the attempt to domesticate reality. They may discover through existential experience that their present way of life is irreconcilable with their vocation to become fully human. They may perceive through their relations with reality that reality is really a process, undergoing constant transformation. If men and women are searchers and their ontological vocation is humanization, sooner or later they may perceive the contradiction in which banking education seeks to maintain them, and then engage themselves in the struggle for their liberation.

But the humanist revolutionary educator cannot wait for this possibility to materialize. From the outset, her efforts must coincide with those of the students to engage in critical thinking and the quest for mutual humanization. His efforts must be imbued with a profound trust in people and their creative power. To achieve this, they must be partners of the students in their relations with them.

The banking concept does not admit to such partnership -- and necessarily so. To resolve the teacher-student contradiction, to exchange the role of depositor, prescriber, domesticator, for the role of student among students would be to undermine the power of oppression and serve the cause of liberation.

Implicit in the banking concept is the assumption of a dichotomy between human beings and the world: a person is merely in the world, not with the world or with others; the individual is spectator, not re-creator. In this view, the person is not a conscious being (corpo consciente); he or she is rather the possessor of a consciousness: an empty "mind" passively open to the reception of deposits of reality from the world outside. For example, my desk, my books, my coffee cup, all the objects before me, -- as bits of the world which surround me -- would be "inside" me, exactly as I am inside my study right now. This view makes no distinction between being accessible to consciousness and entering consciousness. The distinction, however, is essential: the objects which surround me are simply accessible to my consciousness, not located within it. I am aware of them, but they are not inside me.

It follows logically from the banking notion of consciousness that the educator's role is to regulate the way the world "enters into" the students. The teacher's task is to organize a process which already occurs spontaneously, to "fill" the students by making deposits of information which he of she considers to constitute true knowledge. (2) And since people "receive" the world as passive entities, education should make them more passive still, and adapt them to the world. The educated individual is the adapted person, because she or he is better 'fit' for the world. Translated into practice, this concept is well suited for the purposes of the oppressors, whose tranquility rests on how well people fit the world the oppressors have created and how little they question it.

[Footnote #2: This concept corresponds to what Sartre calls the 'digestive' or 'nutritive' in which knowledge is 'fed' by the teacher to the students to "fill them out." See Jean-Paul Sartre, 'Une idee fundamentals de la phenomenologie de Husserl: L'intentionalite," Situations I (Paris, 1947).]

The more completely the majority adapt to the purposes which the dominant majority prescribe for them (thereby depriving them of the right to their own purposes), the more easily the minority can continue to prescribe. The theory and practice of banking education serve this end quite efficiently. Verbalistic lessons, reading requirements, (3) the methods for evaluating "knowledge," the distance between the teacher and the
taught, the criteria for promotion: everything in this ready-to-wear approach serves to obviate thinking.

{Footnote #3: For example, some professors specify in their reading lists that a book should be read from pages 10 to 15 -- and do this to 'help' their students!}

The bank-clerk educator does not realize that there is no true security in his hypertrophied role, that one must seek to live with others in solidarity. One cannot impose oneself, nor even merely co-exist with one's students. Solidarity requires true communication, and the concept by which such an educator is guided fears and proscribes communication.

Yet only through communication can human life hold meaning. The teacher's thinking is authenticated only by the authenticity of the students' thinking. The teacher cannot think for her students, nor can she impose her thought on them. Authentic thinking, thinking that is concerned about reality, does not take place in ivory tower isolation, but only in communication. If it is true that thought has meaning only when generated by action upon the world, the subordination of students to teachers becomes impossible.

Because banking education begins with a false understanding of men and women as objects, it cannot promote the development of what Fromm calls "biophilia," but instead produces its opposite: "necrophily."

While life is characterized by growth in a structured functional manner, the necrophilous person loves all that does not grow, all that is mechanical. The necrophilous person is driven by the desire to transform the organic into the inorganic, to approach life mechanically, as if all living persons were things. . . . Memory, rather than experience; having, rather than being, is what counts' The necrophilous person can relate to an object -- a flower or a person -- only if he possesses it; hence a threat to his possession is a threat to himself, if he loses possession he loses contact with the world. . . . He loves control, and in the act of controlling he kills life. (4)

[Footnote #4: Fromm, op. cit. p. 41.]

Oppression --overwhelming control -- is necrophilic; it is nourished by love of death, not life. The banking concept of education, which serves the interests of oppression, is also necrophilic. Based on a mechanistic, static, naturalistic, spatialized view of consciousness, it transforms students into receiving objects. It attempts to control thinking and action, leads women and men to adjust to the world, and inhibits their creative power.

When their efforts to act responsibly are frustrated, when they find themselves unable to use their faculties, people suffer. "This suffering due to impotence is rooted in the very fact that the human has been disturbed." (5) But the inability to act which people's anguish also causes them to reject their impotence, by attempting . . .to restore [their] capacity to act. But can [they], and how? One way is to submit to and identify with a person or group having power. By this symbolic participation in another person's life, (men have] the illusion of acting, when in reality [they] only submit to and become a part of those who act. (6)

[Footnote #5: Ibid., p 31.]

[Footnote #6: Ibid. 7.]

Populist manifestations perhaps best exemplify this type of behavior by the oppressed, who, by identifying with charismatic leaders, come to feel that they themselves are active and effective. The rebellion they express as they emerge in the historical process is motivated by that desire to act effectively. The dominant elites consider the remedy to be more domination and repression, carried out in the name of freedom, order, and social peace (that is, the peace of the elites). Thus they can condemn -- logically, from their point of view
Education as the exercise of domination stimulates the credulity of students, with the ideological intent (often not perceived by educators) of indoctrinating them to adapt to the world of oppression. This accusation is not made in the naive hope that the dominant elites will thereby simply abandon the practice. Its objective is to call the attention of true humanists to the fact that they cannot use banking educational methods in the pursuit of liberation, for they would only negate that very pursuit. Nor may a revolutionary society inherit these methods from an oppressor society. The revolutionary society which practices banking education is either misguided or mistrusting of people. In either event, it is threatened by the specter of reaction.

Unfortunately, those who espouse the cause of liberation are themselves surrounded and influenced by the climate which generates the banking concept, and often do not perceive its true significance or its dehumanizing power. Paradoxically, then, they utilize this same instrument of alienation in what they consider an effort to liberate. Indeed, some "revolutionaries" brand as "innocents," "dreamers," or even "reactionaries" those who would challenge this educational practice. But one does not liberate people by alienating them. Authentic liberation—the process of humanization—is not another deposit to be made in men. Liberation is a praxis: the action and reflection of men and women upon their world in order to transform it.

Those truly committed to liberation must reject the banking concept in its entirety, adopting instead a concept of women and men as conscious beings, and consciousness as consciousness intent upon the world. They must abandon the educational goal of deposit-making and replace it with the posing of the problems of human beings in their relations with the world. "Problem-posing" education, responding to the essence of consciousness --intentionality -- rejects communiques and embodies communication. It epitomizes the special characteristic of consciousness: being conscious of, not only as intent on objects but as turned in upon itself in a Jaspersian split" --consciousness as consciousness of consciousness.

Liberating education consists in acts of cognition, not transfers of information. It is a learning situation in which the cognizable object (far from being the end of the cognitive act) intermediates the cognitive actors --teacher on the one hand and students on the other. Accordingly, the practice of problem-posing education entails at the outset that the teacher-student contradiction to be resolved. Dialogical relations -- indispensable to the capacity of cognitive actors to cooperate in perceiving the same cognizable object --are otherwise impossible.

Indeed problem-posing education, which breaks with the vertical characteristic of banking education, can fulfill its function of freedom only if it can overcome the above contradiction. Through dialogue, the teacher-of-the-students and the students-of-the-teacher cease to exist and a new term emerges: teacher-student with students-teachers. The teacher is no longer merely the-one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teach. They become jointly responsible for a process in which all grow. In this process, arguments based on "authority" are no longer valid; in order to function authority must be on the side of freedom, not against it. Here, no one teaches another, nor is anyone self-taught. People teach each other, mediated by the world, by the cognizable objects which in banking education are "owned" by the teacher.

The banking concept (with its tendency to dichotomize everything) distinguishes two stages in the action of the educator. During the first he cognizes a cognizable object while he prepares his lessons in his study or his laboratory; during the second, he expounds to his students about that object. The students are not called upon to know, but to memorize the contents narrated by the teacher. Nor do the students practice any act of cognition, since the object towards which that act should be directed is the property of the teacher rather than
a medium evoking the critical reflection of both teacher and students. Hence in the name of the "preservation of and knowledge" we have a system which achieves neither true knowledge nor true culture.

The problem-posing method does not dichotomize the activity of teacher-student: she is not "cognitive" at one point and "narrative" at another. She is always "cognitive," whether preparing a project or engaging in dialogue with the students. He does not regard objects as his private property, but as the object of reflection by himself and his students. In this way, the problem-posing educator constantly re-forms his reflections in the reflection of the students. The students -- no longer docile listeners -- are now--critical co-investigators in dialogue with the teacher. The teacher presents the material to the students for their consideration, and re-considers her earlier considerations as the students express their own. The role of the problem-posing educator is to create, together with the students, the conditions under which knowledge at the level of the doxa is superseded by true knowledge at the level of the logos. Whereas banking education anesthetizes and inhibits creative power, problem-posing education involves a constant unveiling of reality. The former attempts to maintain the submersion of consciousness; the latter strives for the emergence of consciousness and critical intervention in reality.

Students, as they are increasingly posed with problems relating to themselves in the world and with the world, will feel increasingly challenged and obliged to respond to that challenge. Because they apprehend the challenge as interrelated to other problems within a total context not as a theoretical question, the resulting comprehension tends to be increasingly critical and thus constantly less alienated. Their response to the challenge evokes new challenges, followed by new understandings; and gradually the students come to regard themselves as committed.

Education as the practice of freedom -- as opposed to education as the practice of domination -- denies that man is abstract, isolated, independent and unattached to the world; it also denies that the world exists as a reality apart from people. Authentic reflection considers neither abstract man nor the world without people, but people in their relations with the world. In these relations consciousness and world are simultaneous: consciousness neither precedes the world nor follows it.

La conscience et le monde sont dormes dun meme coup: exterieur par essence a la conscience, le monde est, par essence relatif a elle. (8)

[Footnote #8: Sartre, op. cit., p. 32.]

In one of our culture circles in Chile, the group was discussing (based on a codification) the anthropological concept of culture. In the midst of the discussion, a peasant who by banking standards was completely ignorant said: "Now I see that without man there is no world." When the educator responded: "Let's say, for the sake of argument, that all the men on earth were to die, but that the earth remained, together with trees, birds, animals, rivers, seas, the stars... wouldn't all this be a world?" "Oh no," the peasant replied. "There would be no one to say: 'This is a world'."

The peasant wished to express the idea that there would be lacking the consciousness of the world which necessarily implies the world of consciousness. I cannot exist without a non-I. In turn, the not-I depends on that existence. The world which brings consciousness into existence becomes the world of that consciousness. Hence, the previously cited affirmation of Sartre: "La conscience et le monde sont dormes d'un meme coup."

As women and men, simultaneously reflecting on themselves and world, increase the scope of their perception, they begin to direct their observations towards previously inconspicuous phenomena:

In perception properly so-called, as an explicit awareness [Gewahren], I am turned towards the
object, to the paper, for instance. I apprehend it as being this here and now. The apprehension is a singling out, every object having a background in experience. Around and about the paper lie books, pencils, inkwell and so forth, and these in a certain sense are also "perceived," perceptually there, in the "field of intuition"; but whilst I was turned towards the paper there was no turning in their direction, nor any apprehending of them, not even in a secondary sense. They appeared and yet were not singled out, were posited on their own account. Every perception of a thing has such a zone of background intuitions or background awareness, if "intuiting" already includes the state of being turned towards, and this also is a "conscious experience", or more briefly a "consciousness of" all indeed that in point of fact lies in the co-perceived objective background. (10)


That which had existed objectively but had not been perceived in its deeper implications (if indeed it was perceived at all) begins to "stand out," assuming the character of a problem and therefore of challenge. Thus, men and women begin to single out elements from their "background awareness" and to reflect upon them. These elements are now objects of their consideration, and, as such, objects of their action and cognition.

In problem-posing education, people develop their power to perceive critically the way they exist in the world with which and in which they find themselves; they come to see the world not as a static reality, but as a reality in process, in transformation. Although the dialectical relations of women and men with the world exist independently of how these relations are perceived (or whether or not they are perceived at all), it is also true that the form of action they adopt is to a large extent a function of how they perceive themselves in the world. Hence, the teacher-student and the students-teachers reflect simultaneously on themselves and the world without dichotomizing this reflection from action, and thus establish an authentic form of thought and action.

Once again, the two educational concepts and practices under analysis come into conflict. Banking education (for obvious reasons) attempts, by mythicizing reality, to conceal certain facts which explain the way human beings exist in the world; problem-posing education sets itself the task of demythologizing. Banking education resists dialogue; problem-posing education regards dialogue as indispensable to the act of cognition which unveils reality. Banking education treats students as objects of assistance; problem-posing education makes them critical thinkers. Banking education inhibits creativity and domesticates (although it cannot completely destroy) the intentionality of consciousness by isolating consciousness from the world, thereby denying people their ontological and historical vocation of becoming more fully human. Problem-posing education bases itself on creativity and stimulates true reflection and action upon reality, thereby responding to the vocation of persons as beings only when engaged in inquiry and creative transformation. In sum: banking theory and practice, as immobilizing and fixating forces, fail to acknowledge men and women as historical beings; problem-posing theory and practice take the people's historicity as their starting point.

Problem-posing education affirms men and women as beings the process of becoming -- as unfinished, uncompleted beings in and with a likewise unfinished reality. Indeed, in contrast to other animals who are unfinished, but not historical, people know themselves to be unfinished; they are aware of their incompleteness. In this incompleteness and this awareness lie the very roots of education as an human manifestation. The unfinished character of human beings and the transformational character of reality necessitate that education be an ongoing activity.

Education is thus constantly remade in the praxis. In order to be, it must become. Its "duration" (in the Bergsonian meaning of the word) is found in the interplay of the opposites permanence and change. The banking method emphasizes permanence and becomes problem-posing education -- which accepts neither a
"well-behaved" present nor a predetermined future -- roots itself in the dynamic present and becomes revolutionary.

Problem-posing education is revolutionary futurity. Hence it is prophetic (and as such, hopeful). Hence, it corresponds to the historical nature of humankind. Hence, it affirms women and men as who transcend themselves, who move forward and look ahead, for whom immobility represents a fatal threat for whom looking at the past must only be a means of understanding more clearly what and who they are so that they can more wisely build the future. Hence, it identifies with the movement which engages people as beings aware of their incompleteness -- an historical movement which has its point of departure, its Subjects and its objective.

The point of departure of the movement lies in the people themselves. But since people do not exist apart from the world, apart from reality, the movement must begin with the human-world relationship. Accordingly, the point of departure must always be with men and women in the "here and now," which constitutes the situation within which they are submerged, from which they emerge, and in which they intervene. Only by starting from this situation -- which determines their perception of it -- can they begin to move. To do this authentically they must perceive their state not as fated and unalterable, but merely as limiting - and therefore challenging.

Whereas the banking method directly or indirectly reinforces men's fatalistic perception of their situation, the problem-posing method presents this very situation to them as a problem. As the situation becomes the object of their cognition, the naive or magical perception which produced their fatalism gives way to perception which is able to perceive itself even as it perceives reality, and can thus be critically objective about that reality.

A deepened consciousness of their situation leads people to apprehend that situation as an historical reality susceptible of transformation. Resignation gives way to the drive for transformation and inquiry, over which men feel themselves to be in control. If people, as historical beings necessarily engaged with other people in a movement of inquiry, did not control that movement, it would be (and is) a violation of their humanity. Any situation in which some individuals prevent others from engaging in the process of inquiry is one of violence. The means used are not important; to alienate human beings from their own decision-making is to change them into objects.

This movement of inquiry must be directed towards humanization -- the people's historical vocation. The pursuit of full humanity, however, cannot be carried out in isolation or individualism, but only in fellowship and solidarity; therefore it cannot unfold in the antagonistic relations between oppressors and oppressed. No one can be authentically human while he prevents others from being so. Attempting to be more human, individualistically, leads to having more, egotistically, a form of dehumanization. Not that it is not fundamental to have in order to be human. Precisely because it is necessary, some men's having must not be allowed to constitute an obstacle to others' having, must not consolidate the power of the former to crush the latter.

Problem-posing education, as a humanist and liberating praxis, posits as fundamental that the people subjected to domination must fight for their emancipation. To that end, it enables teachers and students to become Subjects of the educational process by overcoming authoritarianism and an alienating intellectualism; it also enables people to overcome their false perception of reality. The world -- no longer something to be described with deceptive words -- becomes the object of that transforming action by men and women which results in their humanization.

Problem-posing education does not and cannot serve the interests of the oppressor. No oppressive order could permit the oppressed to begin to question: Why? While only a revolutionary society can carry out this
education in systematic terms, the revolutionary leaders need not take full power before they can employ the method. In the revolutionary process, the leaders cannot utilize the banking method as an interim measure, justified on grounds of expediency, with intention of later behaving in a genuinely revolutionary fashion. They must be revolutionary -- that is to say, dialogical -- from the outset.
The Children's Machine
RETHINKING SCHOOL IN THE AGE OF THE COMPUTER
Seymour Papert
There was a time when I believed, as many people do, that teachers would be the most difficult obstacle in the way of transforming school.* This simplistic belief, whose insistent presence is in reality a far greater obstacle to educational change than the fact that some teachers actually are conservative, can be traced back to deeply rooted cultural representations. In my case, I remember being impressed in junior high by George Bernard Shaw’s cynical aphorism: “He who can, does; he who cannot, teaches.” Someone who “cannot” is not likely to be a constructive partner in bringing about major change.

Culturally shared negative attitudes toward teachers are nourished by personal experiences. As a rebellious child I saw teachers as the enemy. Then, with time, these feelings merged with a theoretical position which had the illogical consequence of further demonizing teachers by identifying them with the roles that School forced on them. I disliked School’s coercive methods, and it was the teachers who applied the coercion. I disapproved of judgment by grading, and it was the teacher who gave the grades.

*The ideas in this chapter took shape in conversations with Carol Sperry.
Yet I certainly had grounds in early experience for a more sympathetic view of teachers.

Like most people with generally bad memories of school, I have some wonderful impressions of individual teachers. For example, Mr. Wallis has lost none of his presence. "Daisy" (as we called him, though not to his face) officially taught me Latin and Greek, but gave me far more insight into Lewis Carroll than Cicero or Herodotus. He also left me with an eleventh commandment: "Thou shalt invent three theories every day before breakfast and throw them away before dinner." I loved him, and see even now that I am indebted to him for at least some strands of the playful epistemological stance that informs my present thinking. But at the time, and until recently, I classed Daisy as an exception, thus leaving my antiteacher prejudice as entire as the racism of those who say: "Me? Why, some of my best friends are . . . ." The net effect was not to think better of teachers but to say, "Daisy's no teacher, he's a real mensch." I had to write *Mindstorms* and develop Logo to find out how many other teachers are, too; it is School that disguises them as something else.

Logo gave many thousands of elementary teachers their first opportunity to appropriate the computer in ways that would extend their personal styles of teaching. This was not easy for them. They were frustrated by poor conditions: they usually had to work with minimal computer systems and often had to share them among several classrooms; opportunities to develop their own computer knowledge were limited; and School's immune response often snatched away the successes they did achieve. Even the Logo they had in those days looks sadly primitive when I look back on it from the perspective of another decade of growth of the language. More recent versions of Logo are far more user-friendly, intuitive, and flexible. But although only a minority of these pioneering teachers succeeded in using Logo to build a satisfying classroom environment, what they tried to do is a rich source for understanding the force for change latent in their profession. It turned my own thinking around completely. One thinks of a book
Minds & Machines worked for me in the opposite direction as well. I had not written the book with teachers in mind; at most, I imagined it being read by a small vanguard among them. So when the estimated number of teacher readers climbed into six digits, I was pleased but perturbed. What did they like in my book? It was troubling that there was something about my own work I did not understand.

Fortunately, the book also helped me find answers to the questions it raised. It was a passport into the world of teachers. I received hundreds of letters from teachers telling me about their yearnings and hopes, their plans and resentments. I was flooded with invitations to give speeches and seminars, visit schools, and participate in projects. All this offered a special opportunity to understand what teachers were expressing in their experiments with computers. As I did so, my identification of “teacher” with “School” slowly dissolved into a perception of a far more complex relationship. The shift brought both a liberating sense that the balance of forces was more favorable to change than I had supposed and, at the same time, a new challenge to understand the interplay of currents in the world of teachers that favor change and that resist it. Finding ways to support the evolution of these currents may be among the most important contributions one can make to promote educational change.

As background to understanding these currents, I begin by looking at a story recounted by education writer Fred Hechinger in a sorely missed New York Times column. I cannot imagine a teacher who will not hear in the story the echo of some personal experience.

The principal of a New York school dropped in to listen to a chemistry class. The lesson was brilliant. The principal was enthralled. After the class he congratulated the teacher on a superb piece of teaching, and then asked to see his lesson plan. The teacher replied that since he knew this material so well and cared
about it so much, he didn’t think he needed a lesson plan. The principal clearly had no complaint about the lesson itself, but the teacher was guilty of not following procedures and had a letter of reprimand placed in his file.

There is more than one way to read this poignant account of a system defeating its own purposes in the attempt to enforce them. One can take it as a satirico-comic account of a run-in between an overzealous supervisor and a naîve worker, the former ridicu-

lously literal-minded about a minor transgression of the letter of the rules and the latter refusing to understand the importance of appearances, which could have been saved by writing a token lesson plan. On this reading, the story is only incidentally about School; it could be matched by bureaucracy stories from other walks of life.

On another reading, however, the story touches the nerve of what School is really about. It evokes tensions between a warm idea of School as a nurturing place for children and a chilling idea of School as a machine to perform laid-down procedures. It evokes yearnings for teaching that will help us fall in love with knowledge, and frustrations at being made to learn lists of facts, loved or not, that experts have decided must be known.

The choice between these readings of Hechinger’s story reflects the central question about education: Is the trouble with school a superficial one that could be fixed by a good dose of good will and common sense, or is it a deep flaw in the foundational assumptions on which the entire system is built? Is School’s malady a cold or a cancer?

The meaning of these two views is brought out by comparing Hechinger’s incident with my central example from the previous chapter. School has evolved a hierarchical system of control that sets narrow limits within which the actors—administrators as well as teachers—are allowed to exercise a degree of personal initiative. Neither side ever fully accepts these limits. The Hechinger story shows a border skirmish in a permanent struggle for power in which participants constantly test their strength without actually
challenging the system itself. The seeds of a sharper challenge were present in the decision to allow Brian and Henry to spend their time on computer choreography. The chemistry teacher could, had he wished, have written a token lesson plan, as many of his colleagues routinely do. Thelma did not have this option. There could not be a lesson plan for the simple reason that there was no “lesson.”

Thus the original decision about how to use computers placed the teacher on a collision course with School’s system of control: As soon as she decided not to control the students, she took away School’s established way of controlling her. The question has moved from how power is distributed within the educational hierarchy to whether hierarchy is an appropriate mode of organization for education. There are activities where hierarchical organization is obligatory: The military is an obvious example. At another extreme there are activities where any sensible person would judge hierarchical organization to be absurd, for example, in poetry or painting. In other areas there is room for choice in the balance between hierarchy and its opposite—for which I follow Warren McCulloch in using the name heterarchy, which suggests a system in which each element is equally ruled by all others. Where on this spectrum between soldiering and poetry should one place the organization of a school?

There is a danger of thinking about this as a “management problem” that a school could address (and many do) by bringing in a general-purpose expert on how to run organizations. But injecting a new management plan into an otherwise unchanged School is like injecting computers or a new curriculum while leaving everything else unaltered. The foreign body will be rejected. School’s hierarchical organization is intimately tied to its view of education and in particular to its commitment to hierarchical ways of thinking about knowledge itself. What one will consider to be the proper place for School on the heterarchy-hierarchy scale of organizational forms depends on the location of
A caricatured hierarchical theory of knowledge and of school might run something as follows: Knowledge is made of atomic pieces called facts and concepts and skills. A good citizen needs to possess 40,000 of these atoms. Children can acquire 20 atoms per day. A little calculation shows that 180 days a year for 12 years will be sufficient to get 43,200 atoms into their heads—but the operation will have to be well organized, for while some overrun on time can be absorbed, as little as 10 percent would make it impossible to achieve the goal. It follows that the technicians in charge (hereafter called teachers) have to follow a careful plan (hereafter called the curriculum) that is coordinated over the entire 12 years. They must therefore be required to write down each day which atoms they have delivered into the students' memory banks. The problem of quality control is facilitated by the discovery that there are hierarchical relations among the atoms: Facts fall under concepts, concepts can be classified as subjects, and subjects split up as grade levels. A hierarchy of people can be constructed to match the hierarchy of knowledge. Teachers can be supervised by curriculum coordinators and department heads, these by principals, and these in turn by superintendents.

Such a theory might appeal to the analogy of building a Gothic cathedral out of 40,000 blocks of stone. Clearly, strict organization is needed to perform such a task. One cannot have individual workers deciding that they want to put a block here or there just because they are inspired to do so. Educating a child is a similar process. Everyone has to follow the plan.

Of course, nobody would subscribe to these theories in a literal sense. Yet I honestly believe that they capture the essence of the academically respectable theories from which the hierarchical organization of School derives its legitimacy. If the Gothic cathedral model of learning were true in principle, Thelma would have been courting disaster by letting the children in her class decide, so to speak, where to place bricks; and the administration of her school
would have been severely remiss for allowing her to do so. But she was not being lax, lazy, or irresponsible. Teachers who give so much autonomy to their students are thereby declaring their belief in a radically different theory of knowledge, one that entails far more work for them as well as for their students.

My use of the term “theory of knowledge” rather than “method of teaching” is deliberate. Progressive educators do not see themselves as offering an alternative way for students to learn the same list of items of knowledge. They value a different kind of knowledge.

For example, I occasionally use an elevator that has a security code. One has to key in a four-digit number before it will move. Since the code is changed frequently and I use the elevator only rarely, I usually remember each new code in a vague form. “There’s a 17 and a 34,” I say to myself; “perhaps it is 1734 or 3417, or maybe the numbers are 71 and 43.” I make a few tries and the elevator moves. I think that’s fine. It works. In school, however, I would fail the elevator-skills test. This is a trivial example of an important phenomenon that I call knowledge-in-use. When knowledge is doled out in tiny pieces, one can’t do anything except memorize it in class and write it down in the test. When it is embedded in a context of use, one can push it around and fix minor bugs such as reversing the digits of the elevator code.

I am not suggesting that knowledge-in-use is the essence of progressive epistemology or even that every progressive teacher would accept this principle. I am using it here only as an example of a “different kind of knowledge.” What teachers who reject School’s philosophy of education actually believe varies widely. In fact, every teacher should be encouraged to go as far as possible toward developing a personal style of teaching. A less specific metaphor that I used in Mindstorms, however, does seem to capture a widely shared element well enough to provide a framework for looking more closely at the aspirations and problems of progressive teachers. The basis of the metaphor was an observation about the idea that children display “aptitudes” for their various
school subjects. It is thoroughly embedded in our culture that some of us have a head for figures while most don’t, and accordingly, most people think of themselves as not mathematically minded. But what do we say about children who have trouble learning French in American schools?

Whatever the explanation of their difficulty, one certainly cannot ascribe it to a lack of aptitude for French—we can be sure that most of these children would have learned French perfectly well had they been born and raised in France. Perhaps they lack an aptitude for learning French as it is taught in American schools, but that is a different matter altogether. In the same way, we have no better reason to suppose that these children who have trouble with math lack mathematical intelligence than to suppose that the others lack “French intelligence.” We are left with the question: What would happen if children who can’t do math grew up in Mathland, a place that is to math what France is to French? Many teachers accepted the challenge to build something like a Mathland in their classrooms, and took Logo and its turtle as building material. Thelma’s classroom shows in a general way how many went about doing this. Following this metaphor, one can think of Brian and Henry as being in Mathland; what they were doing with the computer was more like learning French in France, while what happened in the regular math class was more like learning math as a foreign language. In these computer contexts, as in learning French in France, the learner can begin by knowing something in a very fumbly sort of way before it becomes established. In the math class, where knowledge is not used but simply piled up like the bricks forming a dead building, there is no room for significant experimenting.

Many progressive teachers might have doubts about whether creating a Mathland is really feasible and hesitations about what inconveniences it might bring if it is; but leaving aside practical considerations, it seems obvious to them that learning French in France and math in Mathland is in principle a better way than those of the traditional classroom.
The immediate consequence for the practice of teaching is the one I have already noted. The learning of a dead subject requires a technical act of carving the knowledge into teachable bites so that they can be fed to the students one at a time by a teacher, and this leads straight into the traditional paraphernalia of curriculum, hierarchy, and control. By contrast, Brian and Henry were able to find their own way to structure their knowledge with only occasional advice. Learning-in-use liberates the students to learn in a personal way, and this in turn liberates teachers to offer their students something more personal and more rewarding for both sides. But this prospect does not come without problems, and some teachers will see it more as a threat than as a liberation.

Thelma's rewarding feeling that she had exercised a creative (and unintentionally subversive) act in setting up her plan for computers brought psychological as well as bureaucratic risk. School's definition of roles and procedures restricts the teacher but also offers protection, as we see in the following story whose main features I have heard from many who have taken the same course as Thelma.

The following is a reconstruction of what I heard from Joe, a fifth-grade teacher:

From the time the computers came I began to be afraid of the day my students would know more about programming than I ever will. Of course, at the beginning I had a big advantage. I came fresh from a summer workshop on Logo, and the students were just beginning. But during the year they were catching up. They were spending more time on it than I could. Actually, they didn't catch up the first year. But I knew that each year the children would know more because they would have had experience in previous grades. Besides, children are more in tune with computers than we grown-ups.

The first few times I noticed that the students had problems I couldn't even understand, let alone solve, I struggled to avoid facing the fact that I could not keep up my stance of knowing
more than they did. I was afraid that giving it up would undermine my authority as a teacher. But the situation became worse. Eventually I broke down and said I didn't understand the problem—go discuss it with some of the others in the class who might be able to help. Which they did. And it turned out that together the kids could figure out a solution. Now the amazing thing is that what I was afraid of turned out to be a liberation. I no longer had to fear being exposed. I was. I no longer had to pretend. And the wonderful thing was that I realized that my bluff was called for more than computers. I felt I could no longer pretend to know everything in other subjects as well. What a relief! It has changed my relationship with the children and with myself. My class has become much more of a collaborative community where we are all learning together.

Reflection on this story will show that there is no simple answer to some obvious quantitative questions that some readers must by now have asked: How many teachers fit the optimistic description of Thelma? How far would they take these ideas? How much effort and sacrifice would they make? My description gives Thelma the purity of a rare dedicated idealist. Many more have the doubts, the fears, and the ambivalence that Joe shares with most of the teachers who were drawn to experiment with computers as an instrument of change. Joe embarked on the experiment with trepidation. He did not fully see in advance what problems he would have, and when they came up he hesitated. Events turned out well in his case, but most others in his position balked and retreated. Many had their computers merged into computer labs. Some followed them, giving up the classroom to become computer teachers. Many felt seduced and abandoned by the talk of a computer revolution as the use of the computer became routinized. Just how many stayed in and how many dropped out is too hard to determine and would, in any case, not be worth knowing since we see from Joe's account that the individual case depends on a fragile balance that can tip one way or the other. What is certainly of no value whatsoever for those interested in change is to play down
the adverse factors: Only by understanding them can we craft sensible strategies for the future. By the same token, they give little grounds for comfort to those who still predict that computers do not have a significant future in education.

Despite his doubts, Joe went further than the others I have mentioned so far. Hechinger's chemistry teacher tried to express his own intellectual enthusiasm in his teaching; Thelma tried to create an environment in which children would develop their own enthusiasms; Joe took a further step by explicitly formulating the idea (which the others may have had tacitly) of joining the fun as a co-learner with his students. The progression is psychologically understandable. Wanting to learn is a basic human desire, and being with children who are doing it while being deprived oneself is like being a dieter watching the diners in a fine restaurant. Why don't all teachers do it?

Many aspects of School block teachers from the fulfillment of functioning in a class as co-learners. The mundane matter of schedule is most often mentioned if one asks progressive teachers. They say that there simply is not enough time. I think Joe shows the fallacy in this explanation, however. There would indeed not be enough time for him to keep everything else and also get in his own learning. But he had the courage to implement a plan with a better chance of working. He changed the life of his class in such a way that students could give as well as take, and his learning was not competitive with theirs but contributed to it. To do this he had to face something that it took courage to admit: Most of the work he made his students do was too boring to entice him to join in! The computer changed the situation because it itself is an interesting object to learn about and because it added dimensions of interest to other areas of work.

What I actually saw Joe doing with his class involved a much broader range of learning than the technical aspects of computer programming that had been the object of his fears. Some of his students were doing work like Brian and Henry, but most were engaged in projects of a very different kind in which mathematics
was integrated into fact-oriented subjects such as history or science. An aspect of these projects was something I first saw in the work of a fourth- and fifth-grade teacher at the Hennigan School in Boston.

Before computers entered her life, Joanne had developed a project as part of her classwork on human biology. The topic of study was the skeleton, and her style of handling it was to ask the students to choose a bone and make a report on it. When the computers came she simply did what she had always done, except that the students knew enough Logo by then to make their report on the computer screen instead of using pencil and paper. In one sense nothing changed except for a shift of media. But the shift had consequences. One of these was related to the fears ex-

This picture was generated by a LogoWriter program written by four fourth-grade students.
pressed by Joe. The computer is an open-ended technical device that incites at least some students to push their knowledge to the limit to enhance the project through an unlimited variety of “effects”; thus learning more about computer techniques becomes part of the project in a way that had not happened with pencil and paper. This might seem to distract from the “main purpose,” which was studying biology. It did not. Thinking about representations on the screen produced a richer engagement with the skeleton than had been usual in the precomputer days. The skeleton illustrated, the collaborative work of four students, shows several features that are typical of what happens in a computer context.

First, the students transformed the assignment of representing a bone into one of representing the entire skeleton, a goal that was made possible by the fact that the computer allowed much better conditions of work: Parts made by the collaborators could be put together more easily. A close look will show that modules could be used in several places, and most important, changes would be made easily without the messy process of erasing or the tedious one of starting over. Second, these same working conditions facilitated a double intention that is clearly visible in this object: The figure was made with an eye to visual aesthetics as well as to scientific accuracy. This raises challenging issues about the nature of knowledge and the criteria for judging it. I would call it an epistemological responsibility of the teacher to enter into discussion with these students (which in fact I had the privilege of doing) about what was sacrificed in each for the sake of the other. There can be no absolute answer, but there can be articulate and thoughtful discussion.

The issue of science and aesthetics is just one of many that make a different kind of demand on—and offer a richer kind of opportunity to—a teacher than is usual in a science class. Whether this is seen as a demand or as an opportunity, it certainly requires knowledge and sophistication for which there is no place in the course catalog of the typical school of education.
Where can teachers find help in developing themselves in these directions? What kind of development would help them?

To define this problem, which may be the most important of all those facing the adoption of computers in education, it might help to review some of the obstacles faced by teachers who try to find a solution. The most brutal of these simply prevents the interesting situation from arising. The designers of the skeleton had access to computers for about one hour a day, and their regular teacher had the freedom to use this time as she wished. Thus they and the teacher could be immersed in the project sufficiently for interesting issues to come up and be dealt with in an interesting way.

The odds are against anything like this happening—though it is a tribute to the amazing resilience of students and teachers that it sometimes does—when students have forty minutes a week of computer lab and learn about word processing, data bases, and what’s in the computer, as well as “do a little Logo.” A second obstacle is the concept of teacher training. Although the name is not what is most important about this concept, it is curious that the phrase “teacher training” comes trippingly off the tongues of people who would be horrified at the suggestion that teachers are being trained to “train” children. The phrase makes me think of toilet training, basic training, and tiger training. I know that the word training is often used for respectable kinds of learning. For example, I said in the second chapter that I was trained as a mathematician. But justifying “teacher training” in this way feels to me—and to quite a number of teachers I know—like justifying the use of the pronoun he on the grounds that it embraces woman. On purely abstract linguistic grounds both usages are “correct,” but in both cases what is involved is not an issue of syntax but one of ideology. Why the asymmetry? Why do we talk about teachers and children so differently? The answer brings me back to my main theme: School does not have in its institutional mind that teachers have a creative role; it sees them as technicians doing a technical job, and for this the word training is perfectly appropriate.
Whether or not one accepts this analysis in general, it is hard not to recognize its truth in the kind of preparation School generally considers appropriate for computer teachers. In many school systems, what the teachers who will use the computers are offered in preparation is quite appropriately called training, for it consists of a small number of two-hour sessions, misnamed "workshops" or "seminars," whose goal is to impart technical skills. To highlight the limitation, it is worth looking at two examples of providing better conditions for teachers to learn and grow.

About eight years ago I conducted a summer workshop on Logo for a small group of teachers. I was a little nervous because I suspected that one of the participants was there not out of commitment to learning Logo but because she was under orders from a principal who wanted a computer project in his school at a time when that was still something exceptional. I knew that a single participant's bottled-up resentment at losing summer vacation time could poison the spirit of the group, even if the others had come out of a personal desire to learn.

One of my preferred styles of working with such a group is to propose a form of project sufficiently open to allow very different approaches and sufficiently restricted to allow the different approaches to be compared. In this workshop I proposed that everyone write a program to represent some aspect of the notion of "village." Programming the computer to draw a village on the screen presents itself as a good theme for beginners to exercise techniques of programming. One can start by writing a procedure to draw a single dwelling; once this is debugged, it can be used as subprocedure for a superprocedure to obtain a group of identical dwellings; and having obtained a product, one can go on to introduce variability and add all manner of frills and details including animation, text, and hypertext. From a teaching point of view, it has the advantage that students can stop at different levels, matching their technical abilities and personal tastes, and yet all have something to show for the work.
As the days went on, my fears did not seem to be founded. Everyone was caught up in the activity. I was especially relieved to observe that the member of the group I had thought would be most difficult seemed hardly able to contain her excitement. In every discussion period she bubbled over with ideas about how she would use what she was learning, even when she was working at her computer she would exclaim from time to time that she couldn't wait to take this back to her classroom. "My kids will love it!" By all the usual rules of evaluation, the workshop was going well. My educational objective for my students (the teachers) was set as learning Logo and the principles of programming, and the class was making reasonably rapid progress in this direction—and showing enthusiasm as well.

Despite this, I had a nagging feeling that something was wrong. I couldn't put my finger on what it was until a slight commotion broke out in the workshop. One of the other participants apparently had the same misgivings as I did but more quickly diagnosed the problem. Losing patience with the expressions of enthusiasm she muttered, "Forget the (expletive) children!" The reaction of the others in the room was electric. Some were shocked and protested; one immediately responded with a supporting remark. I was at first taken aback and then realized that the outburst captured what had been troubling me. The discordant element had been a sense I couldn't yet articulate that the participants thought of themselves as teachers-in-training rather than as learners. Their awareness of being teachers was preventing them from giving themselves over fully to experiencing what they were doing as intellectually exciting and joyful in its own right, for what it could bring them as private individuals. The major obstacle in the way of teachers becoming learners is inhibition about learning.

After the incident I felt something like Joe's sense of liberation. I was freed from a nagging fear about what was wrong and from needily seeking security in the teachers' exclamations of delight. My freedom allowed me to look more closely at what the individu-
als were doing with their programming, and soon I noticed a striking difference in style. Some were constructing the houses by putting together clean geometric shapes, in the simplest case following the example I had used in *Mindstorms*: A “house” can be made by putting a triangle on top of a square. One of the participants seemed uncomfortable with these shapes. Perhaps they had bad associations with School math or perhaps her personality biased her toward fuzzier things. Whatever its origin, the discomfort led her to pick up an idea from someone else’s failure to make a neat geometric pattern to represent a flower garden. It came out as a wiggly line that might have been a failed flower garden but was just the thing to turn into smoke rising from the chimney of the house. After a while all the houses had smoke in varying patterns.

One thing led to another. The smoky effect could be adapted to draw clouds floating over the village and, with a little more adaptation, to draw trees and other less square objects than houses. Sometimes very small actions by a teacher can seed growth in a class. One that became important in this workshop was naming the emerging programming style. I dubbed it “smoky programming” and contrasted it with “hard-edged” programming.

The immediate effect was to encourage the original smoke maker. At this point it was an individual act involving teacher (myself) and student. Gradually it turned into something more social. Naming styles became a habit and encouraged personal pride in them; they became something to discuss and something to own. A vocabulary developed for talking about them, a sense of values for respecting others’ styles even while taking pride in one’s own.

In short, a process was under way that I would call the beginnings of a microculture. Talking about styles is an excellent seed for the development of a learning culture; it contributes to the richness of the immediate learning but also allows the benefits to flow into other areas, since styles can be recognized across a
variety of different contents and activities. All learning benefits from talking about it—so long as the talk is good—and comparing styles is one of the best conversation starters provided that the differences are clear and the participants authentically respect the styles of others while defending their own. But for the talking to be good it must be both rooted in the real concerns of the participants and supported by knowledge and experience.

The issue of the contrast between the smoky and the hard-edged styles of programming was indeed very well rooted. It was not just a simple difference of style, though I was trying to promote a culture in which any difference would in fact be respected; on the contrary, the issue has been central in debates about alternative epistemologies. The hard-edged style is closer to the analytic, generalizable ways of thinking valued by the traditional "canonical" epistemology, which has come under fire from feminists as androcentric, from Afrocentrists as Eurocentric, and generally from many on the political left as representing the thinking of dominating groups. Indeed, research by MIT sociologist Sherry Turkle and myself shows that it is more likely to be the preferred style of white males. This is enough to make it very relevant to teachers, but in fact there is another aspect that makes it even more directly so. Moving from the hard-edged to the smoky style involved a step away from an abstract and formal approach to one that invites all the words that Piaget (taken as representative here of a far wider span of psychological thinking) would attach to the thinking of younger children: concrete, figural, animistic, and even egocentric.

Thus the issue is rooted in the teacher’s concern about what kind of thinking is appropriate for children—but in such a complex way as to lend great importance to the second criterion for good talk about learning: the necessary knowledge and experience. Much more than “training” is needed for teachers to develop the ability to benefit from the presence of computers and to bring this benefit to their students.

It is instructive to note how a small Central American country has been able to handle this problem in a way that puts most
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North American school systems to shame. I would suggest that this is largely because the country classified itself as a "developing country" and made this an advantage compared with countries that see themselves as "developed"—and so presumably have nowhere further to go. One moral of the story is that we might all do better if we dared classify ourselves as "developing."

In 1986 Oscar Arias was running for election as president of Costa Rica. The same mentality that would enable him to win the election, launch the peace process in Central America, and gain the Nobel prize was reflected in an election promise to take steps toward ensuring that Costa Rican children think of themselves as belonging to the modern world and not as Third World outsiders looking longingly. One of his steps would be to bring computers into all the elementary schools of the country. Later I shall have several occasions to refer to aspects of what turned into a project with many exemplary features. Here I focus only on how the project did more than "train" its teachers.

For better or for worse, a decision was taken to invite corporations to submit complete plans, not only to supply and maintain computers but to determine the educational content, teacher preparation, and the evaluation process. This was a commercial plum involving many thousands of computers, so it was not surprising that fourteen companies submitted bids. IBM brought me in as a consultant and followed my advice to submit a plan that was exceptional in the proportion of effort devoted to the preparation of teachers in advance and their support during the project. This may not have seemed to make sense in terms of trimming prices in a competitive bid; but at the head of IBM's Latin American Education group was an energetic, intelligent, and not at all bureaucratic woman. Alejandrina Fernández persuaded her superiors in the corporation that IBM could afford to lose money in the first year of this project. It turned out that paying attention to the role of teachers won her the contract and has led to a successful model that has been used in half a dozen Latin American countries.

The Costa Rican government created a foundation to oversee
the project—an unusual case of a government having the wit to protect a project from its own bureaucracy! Within the foundation the discussion centered on the role of teachers. One group argued that the mode of use should be as easy on the teacher as possible. Many of the teachers in the rural districts had very little experience with technology and no formal education in anything technical. These teachers, it was argued, would be excluded by any mode of using the computers that required technical skills. Thus this group argued for using CAI software, and had this side won the contract would probably have gone to a company offering the kind of ("teacher-proof") turnkey system where the computer is switched on and the teacher doesn’t even have to load a diskette—everything is automatically done under central control. The argument of the other group, though they did not quite put it in these words, was to make it as hard as possible for the teachers. In the end Costa Rica, under the leadership of Clotilda Fonseca, has mounted an exemplary program in which hundreds of teachers, most of whom indeed had no technical background, learned to program in Logo and derived a great new sense of confidence in themselves and their country by mastering something that was experienced as challenging, modern, difficult, and “not for people like them.” This is in quite remarkable contrast with the position adopted by many American school districts that Logo is “educationally good” but “too hard for teachers”!

The debate was settled by an experiment in which a group of teachers participated in an intensive three-week Logo workshop. Although there is no objective way to make such measurements, I think it was obvious to all observers that an exceptional quantity of learning took place in these weeks. I think it was almost as obvious that this happened because the participating teachers felt that much more was involved than a technical improvement in learning basic skills. They were making a personal assertion of their will to appropriate this modern thing; a professional assertion against a view of teaching as a lowly profession; and a national assertion against the view of their country as under-
Many of them were also making an assertion of gender; for a large percentage of elementary school teachers are women and the organizers of the project had had the good sense to reflect this in the selection process.

The Costa Rica project showed in a specially clear form the computer playing a role in identity formation by teachers and brings us back full circle to the issue of negative representations of teachers. In a conversation with Oscar Arias, who asked me what I thought was the most interesting aspect of the project, I focused on what I have been saying here about teachers. Amazement and delight were written all over his face when he heard me talk about how much effort teachers had put into the project. He explained that what he had heard about teachers in the past was on the lines that they wanted more money for less work, and told me how pleased he was that his computer project had educated him as well. I left the presidential palace feeling proud to have been part of an opportunity for teachers to show themselves for what they are and to become a little more.

In addition to allowing teachers the opportunity to make the project part of a developing sense of identity, the Programa Informática Educativa has another feature that makes it developmental for teachers. This is a compromise between the idea of a computer lab (which was imposed by financial constraints) and the classroom computer. The students do go to a separate room where the computers are located, but their regular classroom teacher goes with them. Moreover, the teacher learns with them, too, for in the lab there is also a computer teacher who has had an opportunity for development (to a degree that is rare even in the most "developed" countries) not only as a technical expert but also as the interpreter of a culture of learning.

Another version of the compromise had been the goal of a model pioneered by my MIT research group, first at the Lamp-lighter School in Dallas and then in Project Headlight at the Hennigan School in Boston. The model, which needed more resources than Costa Rica had been able to afford—though far less in
proportion to the national wealth of the two countries—originally incorporated three essential principles. First, the number of computers would be sufficient for every class to spend at least one period each day with its regular teacher, when every student could have full access to a computer. Second, although any educational software might be used on occasion, the primary use of the computers would be based on the assumption that everyone, students and teachers, would be able to program the computer in Logo from the outset. Third, all the teachers would have not only sufficient expertise but also sufficient freedom of choice to use the computers in a manner that would express their personal styles of work. Later, a fourth principle grew out of these three when the Gardner Academy, a largely Latino inner-city elementary school in San Jose, developed its own implementation of the three principles under the name Project Mindstorm. This fourth principle asserts the advantage of the explicit development from within the school of a unique indigenous learning culture and philosophy of education. The project's name marked an intention to adopt my ideas; its divergence from what I had described myself was, in my view, part of a confirmation that it had succeeded. In education, the highest mark of success is not having imitators but inspiring others to do something else.

The project was created by the Technology Center of Silicon Valley, which let the project evolve without interference after it had selected a school and a director. The director was Carol Sperry, who came to computers after many years as a classroom teacher. I believe her own experience helped to empower the teachers in the project to create a culture in the school and to see it as their. She was not someone who came from a university or a school bureaucracy to tell teachers what to do with computers. Because she was a teacher herself, and did not feel answerable to anyone outside the school, she could ask the other teachers to join her in “putting herself in the disk drive along with the Logo disk.” The intensity of the personal involvement created an unusually strong culture of teachers, and this in turn gave several of the
teachers the intellectual confidence needed to nurture an unusual culture among students. An example will illustrate the point.

When I was discussing Brian and Henry, I quoted a student who talked about putting "grace" into his computer graphics. The student, who was from Project Mindstorm, explained that he wanted to grow up to put art and mathematics together. What is unusual here is not the fact that a student would say this, but rather that the teachers could cope with this way of thinking about mathematics. The special demand on the teacher is seen in another light. As long as there is a fixed curriculum, a teacher has no need to become involved in the question of what is and what is not mathematics. But here the teacher was willing to take on what would be considered a philosopher's question, and to become involved in serious discussion with students and with colleagues about whether this student's activities—which looked very different from any math in the curriculum, as the figures on page 80 show—were nevertheless mathematics.

In this chapter my thinking has been conceptual: I have presented a concept of School, a concept of the teacher, a concept of the bureaucrat, and a concept of struggle. I conclude here with some more pragmatic remarks on strategy for change.

What can be done to mobilize the potential force for change inherent in the position of teachers? First I must make some qualifications. The conflict I have described is one of idealized principle. In order to bring out the ideas, it comes too close to presenting an image of pure angels engaged in a holy war with evil demons. Real teachers have mixed positions. Everyone who has grown up in our society has internalized something of School's way and teachers are no exception. At the same time, most school administrators were once teachers and continue to share some of their yearnings. Hechinger's story is not about a wicked principal; it is about the role of principal: the office, not the person. Carol Sperry has written about "contradictions" even in teachers who think of themselves as militantly working for
change. From a feminist stance she sees women as the essential agents of change in education; but the same women have themselves internalized a model of women in a nonaggressive role of accepting authority and as teachers doubly so. The result is that when they try to implement change they often undo in subtle
ways with the left hand what they have wrought with the right, often undermining their own view of things by their use of such language as, "I am just a teacher, but . . . ."

In brief, we are dealing with a situation of uneven development. The problem for society is to give teachers the same pluralist support that the best of them give their students. Individuals at different places need support to move from where they are. They cannot be cajoled or ordered into a too distant place. In my writing I hold out the image of an ideal; but even adopting the ideal fully is meaningless unless one can see the next small step. The practical consequence is that change cannot come about except pluralistically.

The central practical problem is to find ways in which teachers who are at different places in the willingness to work for change can do so. There cannot be a uniform change across the board—any attempt to do that will reduce the pace of change to that of the least common denominator. Society cannot afford to keep back its potentially best teachers simply because some, or even most, are unwilling.
The Case Against Idealising Control

Woodrow Hartzog*

Every year on the first day of my course on information privacy law, I begin by asking each of my students to give me their definition of ‘privacy.’ Their answers wouldn’t surprise you—many say something like ‘things that are secret,’ ‘sensitive information,’ and ‘things shared in confidence.’ But every year one conceptualisation of privacy dominates the conversation: privacy as ‘control over our personal information.’

My students aren’t the only ones who think this way. Ostensibly, nobody can agree on a singular definition of privacy.¹ I’ve argued as much on several occasions.² However, a closer inspection reveals the truth: most people in industry and policy think of privacy and data protection in terms of control.³

Let’s look at the evidence. Mark Zuckerberg testified on behalf of Facebook that ‘We believe strongly in providing meaningful privacy protections to people. This is why we work hard to communicate with people about privacy and build controls that make it easier for people to control their information on Facebook.’⁴ Bill Gates wrote for Microsoft that

Users should be in control of how their data is used. Policies for information use should be clear to the user. Users should be in control of when and if they receive information

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¹ Daniel Solove, Understanding Privacy (First Harvard University Press 2008).
³ I recognize the theoretical, jurisprudential, and practical distinction between privacy and data protection, particularly in Europe. However, in this opinion I will refer to them synonymously insofar as both of them refer to the rules about how personal information is collected, used, processed, and shared. For more information, see also Juliane Kokott and Christoph Sobotta, ‘The Distinction Between Privacy and Data Protection in the Jurisprudence of the CJEU and the ECtHR’ [2013] 3/4 IDPL 222-228 <https://doi.org/10.1093/idpl/ip017> accessed 23 November 2018.
⁴ Mark Zuckerberg’s written testimony for House Energy and Commerce Committee hearing on 11 April 2018 <https://docs.house.gov/meetings/IF/IF00/20180411/108090/HHRG-115-IF00-Wstate-ZuckermanM-20180411.pdf> (note: the word ‘control’ is mentioned over 1,000 times). It goes on like this for a while. See also Dan Fletcher, ‘How Facebook is Redefining Privacy’ (Time, 20 May 2010) <http://content.time.com/time/magazine/article/0,9171,1990798-4,00.html> accessed 23 November 2018 (‘The way that people think about privacy is changing a bit ... What people want isn’t complete privacy. It isn’t that they want secrecy. It’s that they want control over what they share and what they don’t.’); Anita Balakrishnan, Matt Hunter and Sara Salinas, ‘Mark Zuckerberg Has Been Talking About Privacy for 15 Years – Here’s Almost Everything He’s Said’ (CNBC, 21 March 2018) <https://www.cnbc.com/2018/03/21/facebook-ceo-mark-zuckebergs-statements-on-privacy-2003-2018.html> accessed 23 November 2018 (‘When I built the first version of Facebook, almost nobody I knew wanted a public page on the internet. That seemed scary. But as long as they could make their page private, they felt safe sharing with their friends online. Control was key.’); Emily Stewart, ‘The Privacy Question Mark Zuckerberg Kept Dodging’ (Vox, 11 April 2018) <https://www.vox.com/policy-and-politics/2018/4/11/17225518/mark-zuckerberg-testimony-facebook-privacy-settings-sharing> accessed 23 November 2018. (Every time that a person chooses to share something on Facebook, they’re proactively going to the service and choosing that they want to share a photo, write a message to someone, and every time, there is a control right there, not buried in settings somewhere but right there when they’re posting, about who they’re sharing with.]’.
to make best use of their time. It should be easy for users to specify appropriate use of their information including controlling the use of email they send.  

The entire tech industry seems to have reached a consensus that privacy is, in fact, all about control. Many scholars agree. Even professional organisations and privacy advocates embrace the concept of control.

But it’s not just scholars, industry, and privacy advocates. Lawmakers, regulators, and judges seem to have more or less settled on a notion that the key to privacy generally, and data protection specifically, is control over personal information. Recital 7 of the General Data Protection Regulation (GDPR), is titled ‘The framework is based on control and certainty.’ It explicitly states that ‘Natural persons should have control of their own personal data.’ The reasoning behind Europe’s ePrivacy Directive is that


6 See, eg Nicholas Thompson, ‘Jack Dorsey on Twitter’s Role in Free Speech and Filter Bubbles’ (LinkedIn, 17 October 2018) <https://www.linkedin.com/pulse/jack-dorsey-twitters-role-free-speech-filter-bubbles-thompson/> accessed 23 November 2018. Jack Dorsey, Twitter CEO, during interview at Wired 25th Anniversary Festival said ‘I do believe that individuals should own their data and should have the right to have the controls over how a company might utilize that and how a service might utilize that and be able to pull it immediately.’; Andrew DeVore, in written testimony to US Senate Committee on Commerce, Science, and Transportation for September 26, 2018 hearing <https://www.commerce.senate.gov/public/cache/files/7c53b97b-e5b4-49cc-806e-5cd126ee91d4/48369EAB81DF12CEDC5672C9A24AB.09-24-2018devore-testimony.pdf> (‘From early-stage development, we built privacy deeply into the Echo hardware and Alexa service by design, and we put customers in control.’); Bud Tribble, Written testimony to United States Senate Committee on Commerce, Science, and Transportation for September 26, 2018 hearing <https://www.commerce.senate.gov/public/cache/files/0f5ba077-2db4-4a16-915d-4a97f152d447/EC28DFD9356AA86DF7ECA3835F-09-24-18tribble-testimony.pdf> (The Apple Vice President of Software Technology wrote ‘When we do collect personal information, we are specific and transparent about how it will be used. We do not combine it into a single large customer profile across all of our services. We strive to give the user meaningful choice and control over what information is collected and used.’).


9 DOJ’s Reporters Comm. For Freedom of the Press 489 US 749, 763 (1988); Priscilla M Regan, Legislating Privacy: Technology, Social Values, and Public Policy (The University of North Carolina Press 1995) (‘[B]oth the common law and the literal understandings of privacy encompass the individual’s control of information concerning his or her person.’); ibid 4 (‘The definition of privacy that has provided the basis for most policy discussions in the United States, namely that privacy is the right to control information about and access to oneself.’).

10 Recital 7 of Regulation (EU) 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (2016) OJ L119/1. The framework is based on control and certainty.
[T]he Regulation enhances end-user’s control by clarifying that consent can be expressed through appropriate technical settings.'11 California’s new Consumer Privacy Act of 2018 provides that ‘Fundamental to this right of privacy is the ability of individuals to control the use, including the sale, of their personal information.’12

The list goes on.13

Some scholars have recognized the limitations of control as a conceptualisation of privacy.14 Paul Schwartz has argued that ‘the critical problem with the model of privacy-as-control is that it has not proved capable of generating the kinds of public, quasi-public, and private spaces necessary to promote democratic self-rule.’15 Specifically, he argued that thinking of privacy in terms of control either leads people to think they are acting more autonomously than they really are, or collapses completely in the face of the weighty reasons in support of revealing personal information. The danger is one that a belief in the virtue of self-reliant data control cannot acknowledge: information processing itself can undermine an individual’s ability to participate in social and political life.16

They warned us, and we didn’t listen. Now an empire of data protection has been built around the crumbling edifice of control.

The problem is not just that the idea of privacy as control has shortcomings or isn’t up to the job. It’s far worse. The idealisation of control in modern data protection regimes like the GDPR and the ePrivacy Directive creates a pursuit that is actively harmful and adversarial to safe and sustainable data practices. It deludes us about the efficacy of rules and dooms future regulatory proposals to walk down the same, misguided path.

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12 The California Consumer Privacy Act, AB375, s2(a) (23 September 2018).
13 See John Kennedy, ‘Data chief Helen Dixon: “Tech is crashing against social norms”’ [Silicon Republic, 7 November 2018] <https://www.siliconrepublic.com/enterprise/dpc-helen-dixon-interview-tech-society/> accessed 23 November 2018 (quoting Helen Dixon, Ireland's Data Protection Commissioner, in Silicon Republic on 7 November 2018 saying ‘[When it comes to privacy and phone numbers], as with many areas of data protection, it is an issue of consumer choice to control in what circumstances they want their number displayed and so on.’). See also ‘UK ICO Releases Code on Data Sharing’ [Hunton, Andrews, Kurth, Privacy & Information Security Law Blog, 12 May 2011] <https://www.huntonprivacyblog.com/2011/05/12/uk-ico-releases-code-on-data-sharing/> accessed 23 November 2018 (quoting Christopher Graham, UK Information Commissioner, in 2011 ‘The public rightly want to remain in control of who is using their information and why, and they need to feel confident that it is being kept safe.’); Mark Halper, ‘Isabelle Falque-Pierrotin: Privacy Needs to Be the Default, Not an Option’ [Wired, June 2015] <https://www.wired.com/brandlab/2015/06/isabelle-falque-pierrotin-privacy-needs-default-not-option/> accessed 23 November 2018 (quoting Isabelle Falque-Pierrotin, former Chair of Article 29 Working Party, in Wired in 2015 saying ‘[Delisting is so important because] It gives the possibility to each of us not to alter the past but to have the possibility to control a little bit what we have done in the past and their digital appearance.’); Ann Cavoukian ‘Privacy Controls Must Be Placed Back Into the Hands of the Individual’ [Globe and Mail, 27 March, 2018] <https://www.theglobeandmail.com/opinion/article-privacy-controls-must-be-placed-back-into-the-hands-of-the-individual/> accessed 23 November 2018 (The former three-term Information and Privacy Commissioner of Ontario argued ‘We must take back control of our personal information from organizations and place it in the hands of the data subject, where it belongs... Now you will be in the driver’s seat. You will be in control – privacy is all about control.’).
16 ibid 1663.
In fact, except in a few rare instances, I argue that we should dislodge and minimise the concept of control as a goal of data protection.

I’m guilty of it too. In the past I’ve advocated for more control over personal information.\textsuperscript{17} I’ve sought private law approaches that might empower data subjects and meaningfully mitigate data abuses. I now realise that I was asking far too much from a concept that works best when preserved, optimised, and deployed in remarkably limited doses. Our personal agency is required for control to work and, after all, we are only human. The concept of control is far too precious and finite to meaningfully scale. It will never work for personal data mediated by technology.

Now at this point you might be saying to yourself, ‘Well, sure, if the control is conditional, vague, uniformed, and contingent upon action, then of course it’s no good. But our industry/framework/goal is different—we advocate for real control.’ This kind of idealised control is impossible in mediated environments. Here’s why:

\textit{First, control is illusory.} It’s a bit of a shell game. That’s because the control we are given online is mediated, which means it cannot help but be engineered to produce particular results. When it comes to control, design is everything. The realities of technology at scale mean that the services we use must necessarily be built in a way that constrains our choices. Imagine a world where every user got to dictate their own terms in an open text box instead of a boilerplate terms of use. Companies would never get off the ground. Instead, we get boxes to check, buttons to press, switches to activate and deactivate, and other settings to fiddle with.

In theory, control serves our autonomy. It respects peoples’ choices. When we are in control, we are relatively free. The problem with respecting everyone’s personal commitments is that for-profit tech companies have their own agendas. They want users to be maximally forthcoming to monetise all this information. Hence, it is to their advantage to make users believe they have more control than they are actually given.

Furthermore, personal views of privacy are subject to change. Hence, tech companies have an incentive to re-engineer privacy preferences so that people who aren’t maximally disclosing come to share more and more information.\textsuperscript{18} A good strategy for accomplishing this is giving users the illusion that they are freely changing their minds, fully aware of the costs and benefits. Such knowledge, of course, never exists; it’s information asymmetries from here to the end of time.

Our mediated perception of control obscures the fact that design funnels behaviour. People can only click on the options that are provided to them. Ethicist Tristan Harris has written

\begin{enumerate}
\item See, eg, Brett Frischmann and Evan Selinger, \textit{Re-Engineering Humanity} (Cambridge University Press 2018); Hartzog, \textit{Privacy’s Blueprint} (n 2).
\end{enumerate}
Western Culture is built around ideals of individual choice and freedom. Millions of us fiercely defend our right to make ‘free’ choices, while we ignore how those choices are manipulated upstream by menus we didn’t choose in the first place.19

According to Harris,

This is exactly what magicians do. They give people the illusion of free choice while architecting the menu so that they win, no matter what you choose… By shaping the menus we pick from, technology hijacks the way we perceive our choices and replaces them with new ones.20

We give this fake control to our kids often, such as when I give my kids a choice between going to the park or the movies. They feel empowered and I avoid a trip to the pet store so I can stave off a conversation about a new puppy for one more week.

Design also nudges us by sending us signals and making tasks easier or harder to encourage us to act in predictable ways. Companies deploy ‘dark patterns’ to exploit our built-in tendencies to prefer shiny, colourful buttons and ignore dull, grey ones. They may also shame us into feeling bad about withholding data or declining options. They might simply make exercising control possible but costly through forced work, subtle misdirection, and incentive tethering.21

Sometimes we get wheedled into oversharing simply through the design of online services. Platforms design systems to make sharing feel good, such as encouraging us keeping a ‘streak’ going in Snapchat or nudging us to share old posts or congratulate others on Facebook. In addition, platforms make sharing so damn easy. The key to keeping the data spigot flowing is to get people to want to say yes and to require the least amount of effort for them to impulsively do so. Desire has powerful tendency to dampen scepticism. If we users want it bad enough, we can rationalise any decision.

The control we get in mediated environments will always be somewhat illusory, even if companies make every effort to make that control meaningful. That’s because they can’t do anything about the fact that exercising control requires choosing, and those choices must be architectured. Cass Sunstein wrote

When people make decisions, they do so against a background consisting of choice architecture. A cafeteria has a design, and the design will affect what people choose to eat. The same is true of websites. Department stores have architectures, and they can be de-

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20 ibid.

21 For more information on the concept of dark patterns, see Harry Brignull’s <http://www.darkpatterns.org>.
signed so as to promote or discourage certain choices by shoppers (such as leaving without making a purchase).22

This architecture will affect people’s choices even if the effect is not intended by designers. For example, people have a tendency to buy things in a store they encounter first, so even if you are not trying to sell a lot of a chocolate, putting candy bars at the entrance to your store will probably move more sweets than if you tucked them away in some corner.

We cannot avoid choice architecture. Sunstein wrote,

Human beings (or dogs or cats or horses) cannot wish [choice architecture] away. Any store has a design; some products are seen first, and others are not. Any menu places options at various locations. Television stations come with different numbers, and strikingly, numbers matter, even when the costs of switching are vanishingly low; people tend to choose the station at the lower number, so that channel 3 will obtain more viewers than channel 53.23

Of course, these choices are not always harmful for us. Many of them might be quite useful. For example, lawmakers and companies should preserve user choice in the form of data subject rights like access and deletion. In the right regulatory environment, features like privacy dashboards and control panels can empower people while minimising the risk of inaction.

But asking companies to engineer user control paves the way for abuse and self-dealing at the margins. At scale, these margins matter. Even among those acting in good faith, we are left with the problem of relying on the notion of control and choice to do more work for us than it’s capable of. We risk looking around at the robust new frameworks for data protection, the rules built to encourage meaningful control over personal information, patting ourselves on the back and saying ‘mission accomplished,’ when that isn’t true. It wasn’t even the right mission.

Second, control is overwhelming. To hear people tell it, control is something we can never get enough of. There seems to be no problem in privacy that cannot be remedied by chucking a few more switches, delete buttons, and privacy settings at people. Companies promise more and better controls, and then, when privacy harms happen, we collectively decide they should have turned the control knob up to eleven.24 I must admit to doing this as well, having argued on several occasions for additional, improved privacy settings for users.25

23 ibid.
24 With apologies to the great Nigel Tufnel.
Control over personal information is attractive in isolation. Who wouldn’t want more power over things that affect our lives? But with this power often comes a practical obligation. If you do not exercise that control, you are at risk. Companies can take your inaction as acquiescence. As I’ve written elsewhere,

while you might remember to adjust your privacy settings on Facebook, what about Instagram, Twitter, Google, Amazon, Netflix, Snapchat, Siri, Cortana, Fitbit, Candy Crush, your smart TV, your robot vacuum cleaner, your WiFi-connected car, and your child’s Hello Barbie?26

Mobile apps can ask users for over 200 permissions and even the average app asks for about five.27 The problem with thinking of privacy as control is that if we are given our wish for more privacy, it means we are given so much control that we choke on it.

Some recent strides in design rules, such as the GDPR’s progressive ‘data protection by design and by default’ mandate, have mitigated some of the harm that comes from overwhelming users with choices. However, even if the default works, demands are still being made of us to make us relent.28 Anyone that has turned off notifications for apps like Facebook’s Messenger can attest to the relentless, grinding requests for the user to turn them back on almost every time the app is opened. Many can relate to the experience of a child asking for candy, over and over, until the requests become too much to ignore and we give in, simply to quiet them. Willpower can feel like a finite, vulnerable, and subjective resource, and systems are designed to deplete and erode it.29 Once our willpower and ability to make choices has been compromised, the control users have been given is meaningless.

Even if industry figures out the platonic ideal of how a company can give data subjects’ control, it wouldn’t solve the bandwidth dilemma. People only have twenty four hours in a day and every company wants you to make choices. Another tragedy of the commons. Even if one company (or all companies) perfected a control interface, people would still be faced with a barrage of decisions because they use multiple apps and services. Individual control over one data flow won’t change the fact that the data ecosystem is vast. And it should be if the market is to be competitive. The modern data ecosystem is mind-bogglingly complex, with many different kinds of information collected in many different ways, stored in many different places, processed for many different functions, and shared with many other parties. And even if every tech com-

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28 art 25 of Regulation (EU)2016/679 on data protection by design and by default [2016] OJL119/1. See also recital 78 of Regulation (EU) 2016/679 on appropriate technical and organisational measures.
pany merged into GoogAppazonbookle, the tension between simplicity and nuance inherent in one of the most complex and fraught environments imaginable would seem irresolvable. This is because nuance gets glossed over when companies try to simplify and shorten information. Risk is either hidden through abstraction or made so explicit and voluminous we don’t even know where to begin.

Finally, control is myopic. Notions of individual control don’t fit well with privacy as a collective value.30 ‘Data privacy is not like a consumer good, where you click “I accept” and all is well,’ wrote scholar Zeynep Tufekci.31 ‘Data privacy is more like air quality or safe drinking water, a public good that cannot be effectively regulated by trusting in the wisdom of millions of individual choices.’ When privacy is thought about in such individualistic, transactional terms, peoples’ sense of privacy is always being negotiated against what others value. Control has to be tempered against other values because no single privacy ideology should be supreme in a pluralistic society where other people’s autonomy matters.

Furthermore, as my work with Evan Selinger on Facebook’s emotional contagion scandal emphasized, networked online disclosures make individualistic conceptions of control outdated and require deeper thoughts about networked privacy—the idea that a great deal of personal information can be revealed by other people in ways that no individual can possibly control.32

What makes us think that the collective result of atomised decisions will be best for privacy, anyway?33 Scholars Alessandro Acquisti, Laura Brandimarte, and George Loewenstein have noted that a large body of research shows that peoples’ privacy preferences are uncertain, contextually dependent, and malleable.34 The availability of knowledge doesn’t necessarily translate into meaningfully informed decisions.

Lawmakers favour mandated disclosures, like the warnings on cigarette boxes, because they are cheap and counterbalance ‘information disparity’—that is, the reality that companies often know much more than consumers regarding the wisdom of a decision.35 But in this context, users are being asked to consider the privacy implications of each post they create—an impossibly complex calculation to make about future risks and consequences.

30 See, eg, Regan, Legislating Privacy (n 9) 212-214; Anita Allen, Unpopular Privacy (OUP 2011) 13; Cohen (n 14).
Another problem with control is that it leaves us wanting a more firm moral anchor. Control presumptively gives people choices, autonomy, and freedom but often not in any concrete sense. Too often, idealizing control leaves designers and data subjects without much of a sense of the deeper values to be preserved by the system’s purpose or design. This lack of an ethical mooring encourages ideological drift and abuse. When control is the North Star, company leaders and policy makers also aren’t given much to work with when tasked with improvement. Different kinds of control seem to be valued equally or treated as a monolith. No one is sure which choices and controls are more important than others. This paves the path for rote formalism and complacency. In the absence of more articulate values, CEOs and lawmakers say ‘what is needed is more control.’ If something goes wrong, well, then, we must not have had enough control, as though that would solve the problem.

But it’s not clear that more control and more choices would help us. If anything, people need fewer, better personal data choices driven by moral values. But it’s hard to rank which choices are good without a more concrete theory of what we are protecting against. This is where additional values such as trust, obscurity and autonomy, become important. They give us a better roadmap for how to allocate the precious resource of control. We need an approach that incorporates multiple values and is capable of recognizing privacy as a social good. Idealising control will stymie meaningful change.

We’re Using Control Like It’s a Proxy. It’s Time to Embrace More Direct Values. Control should not be idealised as the future of privacy because it usually gets expressed as ‘choice’ in a way that undercuts its own mission. Given the pathologies of mediated choice, people should have a baseline, fundamental level of protection regardless of what they choose. What we have now is a system that allows companies to offload the risks of data onto their data subjects.

Justifying control measures on privacy grounds requires so much justification, so much stretching, bending, and tying ourselves in knots, that it feels like it’s merely serving as a proxy for some other protection goal that’s just out of reach. Control feels intuitively right and has selling power, so we use it.

But what is the result that policymakers, industry, advocates, and data subjects are really hoping for? Surely it can’t be control for control’s sake, for the reasons covered above. Control ostensibly serves autonomy, but in mediated environments involving personal data, idealising control actually seems corrosive to autonomy. Is control valuable because people have such diverse privacy preferences? Or does it just appear that way because personal data risks are virtually impossible for people to consistently assess?

37 For a deeper exploration into these three values, see Hartzog, Privacy’s Blueprint (n 2).
If data processing is so dangerous that it requires formal permission, and choices can only meaningfully be made in elusive, demanding, and bounded environments with preconditions such as ‘freely given, specific, informed, retractable, and unambiguous,’ then why are we allowing controllers to engage in what feels like a fiction, even under optimal conditions? Is idealising control just a contorted and indirect way to pressure companies to lay off risky data practices? If so, why not dispense with the pretence of demanding a form of control that seems destined to misdirect industry efforts towards formalistic compliance without a meaningful change in processor behaviour?

Lawmakers have more direct options. Prohibit collection outright. Mandate deletion. Get serious with purpose limitations and the concept of ‘legitimate interest.’ Change the nature of the relationship between users and companies entrusted with their data to one that is fiduciary in nature. Mandate non-delegable duties of loyalty, care, and honesty. In other words, because it is virtually impossible for people to be adequately informed of data risks and exert control at scale, our rules should make sure companies cannot unreasonably favour their own interests at our expense.

The case against privacy control is an appeal to more substantive and effective privacy-related values. By expanding beyond the notion of privacy as control, lawmakers would be freed to create some rules to ensure companies are trustworthy regardless of the control we are given.
A Call for Critical Instructional Design

27 OCTOBER 2017 on critical instructional design, critical pedagogy

On October 27, 2017, as part of an international fellowship at Warwick University, I offered a workshop with Jesse Stommel about critical instructional design. What follows is the transcript and slides for the talk I gave during that workshop.

To get at why critical instructional design is even something to
talk about, we have to understand it as a kind of resistance. And for that, I have to start with a story.

A very long time ago, I wore the mantle of instructional designer for a small start-up firm in Colorado whose nearly sole client was a company that provided unfacilitated online training for banks, and whose primary foundation for instruction was Bloom’s Taxonomy. Quite literally, software for corporate training was designed around the cognitive domain of the Taxonomy of Educational Objectives. All learning, in this case, boiled down to five component objectives:

- Remembering
- Understanding
- Applying
- Analyzing
- Evaluating

And every course we wrote scaffolded learning along the ladder of these objectives, almost always resting at application-level work. Doing a task was the end for which understanding that task was the means. If you knew how, and you could do, then learning had happened.

Bloom and his team defined knowledge as involving “the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure, or setting.” Which means that, to instructional design, knowledge is the same as recall.
Most of my day was spent building self-guided training modules in a software platform designed around Bloom's Taxonomy, learning objectives, and alignment of content with assessment. Design was nearly mathematical, in order to make learning utterly standard. This standardization, derived from research-based “best practices” arose from a desire to make the acquisition of knowledge efficient and impossible to avoid.

Those best practices were derived primarily from behaviorist theories of learning, like those forwarded by B. F. Skinner. In his chapter “The Technology of Teaching“, Skinner asserts that:

*The application of operant conditioning to education is simple and direct. Teaching is the arrangement of contingencies of reinforcement under which students learn. They learn without teaching in their natural environments, but teachers arrange special contingencies which expedite learning, hastening the appearance of behaviour which would otherwise be acquired slowly or making sure of the appearance of behaviour which might otherwise never occur (429-430).*

In other words, the secret to efficient learning is a controlled environment, a managed environment, a place where the correct behavior results in the desired outcome. Later, Skinner would forward an idea about teaching machines which could guarantee that learners would reach desired outcomes, regardless of the presence of a human teacher.

Operant conditioning and the manipulation of response to
stimuli are at the heart of theories that support instructional design. But more, they form the foundation of almost all educational technology—from the VLE or LMS to algorithms for adaptive learning. Building upon behaviorism, Silicon Valley—often in collaboration with venture capitalists with a stake in the education market—have begun to realize Skinner’s teaching machines in today’s schools and universities.

And there’s the rub. When we went online to teach, we went online almost entirely without any other theories to support us besides instructional design. We went online first assuming that learning could be a calculated, brokered, duplicatable experience. For some reason, we took one look at the early internet and forgot about all the nuance of teaching, all the strange chaos of learning, and surrendered to a philosophy of see, do, hit submit.

The problem we face is not just coded into the VLE, either. It’s not just coded into Facebook and Twitter and the way we send an e-mail or the machines we use to send text messages. It’s coded into us. We believe that online learning happens this way. We believe that discussions should be posted once and replied to twice. We believe that efficiency is a virtue, that automated proctors and plagiarism detection services are necessary—and more than necessary, helpful.

But these are not things that are true, they are things that are sold.
In the time since I was an instructional designer building training courses for corporations, the digital landscape has changed so radically as to be unrecognizable from 1999. We've seen the advent of social media, wiki spaces, crowdsourcing, and Connectivism, a resurgence of Constructivist pedagogies, the Massive Open Online Course, and more. Instead of the relatively sterile, humorless environment of the early LMS, now across the internet, we are exposed afresh to the idiosyncrasies of culture, and also the deep-seated problems of racism, misogyny, xenophobia, homophobia... and on many fronts we're seeking ways to challenge these issues using digital media. There have been hashtag revolutions, fake news, cyberbullying, and the rise of micro-celebrity.

And yet, instructional design at its core, has not changed much. Neither has the technology upon which it floats.

When I left instructional design and entered graduate school, I was immersed in teacher training founded upon the critical pedagogy of teachers like Paulo Freire, John Dewey, Maria Montessori, bell hooks, Peter Elbow, and Henry Giroux. Here I learned about an approach to education that involved helping students develop an epistemological relationship to reality, to encouraging them to be “readers of their world” so that they could better grasp the oppressive forces and institutions that controlled their society, and could develop a knowledge of their ability to make change. Bloom’s Taxonomy disappeared as an approach, replaced by student-centered learning, collaboration, and problem-based education.
Starting in 2005, fresh out of graduate school, I found myself again teaching in fully online environments, only now in higher education settings. Immediately, I found it a challenge to bring the principles of critical pedagogy into a digital classroom space designed against them. The learning management system sought to do just that: manage learning; and I was hard put to find ways to perforate the baked-in pedagogies of the interface so that a more critical learning could take hold.

Over the last 12 years, I've been developing a different approach to instructional design—always with Jesse’s support and help—which is critical instructional design.

Critical instructional design is a term and concept I introduced during a Digital Pedagogy Lab online course offered in Canvas. That course sought to explore the possibility of an intersection between critical pedagogy and instructional design. Because the two approaches to learning are at odds with one another, the intersection between them necessarily birthed something new.

And that new thing is still being born. Critical instructional design is an early, emerging attempt to get at some concrete methodologies for creating agentive spaces in online and hybrid learning environments.

It’s not an iteration of traditional instructional design. It doesn’t find its roots in behaviorism or the ideologies of B. F. Skinner. Instead, critical instructional design looks to Freire, hooks, John Holt, Seymour Papert, and others for both inspiration and
The critical instructional design approach prioritizes collaboration, participation, social justice, learner agency, emergence, narrative, and relationships of nurture between students, and between teachers and students. It acknowledges that all learning today is necessarily hybrid, and looks for opportunities to integrate learners’ digital lives into their digitally-enhanced or fully online learning experiences.

Importantly, in keeping with its social justice roots, critical instructional design seeks to create learning and educational opportunities for students of all backgrounds, leveraging techniques especially to give platforms for those voices most usually suppressed or oppressed, including the voices of women, people of color, LGBTQ folk, people with disabilities, and more. It works against the standardization of so many educational technologies, and aims for the fullest inclusion possible.

Jesse spoke on Tuesday (and in his blog post he posted last night about the need to find ways to allow emergence in teaching and learning. Assessment of all kinds assume a desired outcome; and below that they need to assume that all learners can reach the same outcomes, no matter their backgrounds or intersectionality.

When I am asked why I don’t use traditional assessments (or rubrics) (or learning objectives) when I teach, I answer that I believe that 1. participation is an individual choice; 2. learner
contributions are meaningful content in the course; 3. there are no “right” answers to the questions I’m bound to ask. I could build assessments for courses I teach, but that would require a sense that learners would accomplish what I want them to accomplish.

How do we ever know for certain that what we want learners to accomplish is what they should accomplish? In truth, we don’t. But if we don’t at least manufacture outcomes, then we teach into a space of uncertainty, un-measurability—and that’s scary. And yet, as my colleague Amy Collier has said,

“If, as online educators, developers, policy makers, designers and researchers, we don’t attempt to work with the messiness of learning, we will not be able to make really meaningful educational experiences online, or make meaning from the online experiences that our students, faculty and colleagues are having.”

One of the key principles of critical instructional design is that concept of emergence, that outcomes are determined by the learning process, and not as much predetermined. Jesse recommends that we don't wield outcomes like weapons, and I usually give the advice that if you must include learning outcomes in your course, plan for everyone to meet them mid-term... and let the rest of the term emerge.

I build courses the way I imagine stories. A fiction writer at heart, I'm much more interested in a slow build to an unexpected climax than I am a predictable storyline. When I
envision a course, my best hope is that students will be narrators (reliable, unreliable) and that it will be their characters that drive the story.

Today is no exception. There are no outcomes here, nothing that I nor you could check off a list and say "I learned exactly what he said I would." Hopefully, what you’ll learn will emerge out of how you participate, what you decide to read, what rabbit holes you go down, the way you’ll listen (to me, to each other, to yourself).

At the end of my keynote at the Digital Pedagogy Lab 2016 Institute, I welcomed a question from one of the audience members. She said: "Everything you're telling us makes sense, and it sounds really good. But, when I get back to my institution, and I'm the only one thinking these things, how do I actually make things happen? What can I do to change the way I teach?"

And I answered, "I really can't tell you. How critical instructional design grows is up to you. You have to figure out what it means, how to make it happen." As I said a few minutes ago, "Critical instructional design is an early, emerging attempt to get at some concrete methodologies for creating agentive spaces in online and hybrid learning environments."

So what happens now is that we spend some time working together to make these ideas become practice.
A Call for Critical Instructional Design from Sean Michael Morris

Photo by Ken Reid on Unsplash.
The future of digital culture—yours, mine, and ours—depends on how well we learn to use the media that have infiltrated, amplified, distracted, enriched, and complicated our lives. How you employ a search engine, stream video from your phonecam, or update your Facebook status matters to you and everyone, because the ways people use new media in the first years of an emerging communication regime can influence the way those media end up being used and misused for decades to come.¹ Instead of con- fining my exploration to whether or not Google is making us stupid, Face- book is commoditizing our privacy, or Twitter is chopping our attention into microslices (all good questions), I’ve been asking myself and others how to use social media intelligently, humanely, and above all mindfully. This book is about what I’ve learned.

I believe that learning to live mindfully in cyberculture is as important to us as a civilization as it is vital to you and me as individuals. The multi- fold extension of human minds by chips and nets in the first decade of the twenty-first century has granted power to billions, but in these still-early years of multimedia production studios in your pocket and global informa- tion networks in the air, it is clear to even technology enthusiasts like me that our enhanced abilities to create and consume digital media will cer- tainly mislead those who haven’t learned how to exert mental control over our use of always-on communication channels.

The mindful use of digital media doesn’t happen automatically. Think- ing about what you are doing and why you are doing it instead of going through the motions is fundamental to the definition of mindful, whether you are deciding to follow someone on Twitter, shutting the lid of your lap- top in class, looking up from your BlackBerry in a meeting, or consciously deciding which links not to click. Although educational institutions have been slow to incorporate digital literacies, practical know-how is available
to those who figure out how to find it. This know-how, from the art of growing social capital in virtual communities to the craft of cultivating wiki collaboration, might determine whether life online will drive us to distraction, or augment and broaden our minds.

For individuals, the issue of where digital culture may be heading is personal as well as philosophical: knowing how to make use of online tools without being overloaded with too much information is, like it or not, an essential ingredient to personal success in the twenty-first century. Just as learning to drive an automobile (or at least learning how to survive as a pedestrian) was crucial for citizens of the early twentieth century, learning how to deploy attention in relation to available media is key today for success in education, business, and social life. Similarly, those who understand the fundamentals of digital participation, online collaboration, informational credibility testing, and network awareness will be able to exert more control over their own fates than those who lack this lore.

I see a bigger social issue at work with digital literacy, in addition to personal empowerment: if we combine our individual efforts wisely, enough of the right know-how could add up to a more thoughtful society as well as enhance those individuals who master digital network skills. Web 2.0 impresario Tim O’Reilly claims that the secret sauce behind Google, Wikipedia, and the Web itself is the “architecture of participation,” enabling countless small acts of self-interest like publishing a Web page or sharing a link to add up to a public good that enriches everybody. Examples of the social-media-enabled public goods that grow out of self-interested actions include the Web and free online search engines.²

I don’t believe that technology itself, a fixed human nature, or the powers that be wholly determine who ends up in control and who ends up being controlled by others when a communication medium is adopted. But I do recognize that powers eventually emerge that try to close gates, meter resources, and lock down liberties. I’m enough of an optimist to persist in believing that this hasn’t happened quite yet, despite real advances in the direction of control by governments and corporations around the world. Right now (and for a limited time), we who use the Web have an opportunity to wield the architecture of participation to defend our freedom to create and consume digital media according to our own agendas. Or by not acting in our own interests, we can let others shape our future.

If I am correct that informed actions might still influence the outcome, declaring that technology alone will solve social problems caused by the use of technology is dangerously naive; at the same time, it is dangerously nihilistic to dismiss all the mental and social tools that microchips make
possible as irredeemably destructive. People’s actions influenced the ways print media shaped the cultural evolution of the past five hundred years. The early users of the telephone insisted on using it to socialize, not as the broadcast medium envisioned by the first telephone companies. Just as people in previous eras appropriated printing presses and telephones in ways that the inventors and vendors of the enabling technologies never imagined, the shape of the social, economic, political, and mental infosphere now emerging from the combination of inexpensive though powerful computers, mobile communication devices, and global digital networks is not yet fully hardened, and thus can still be influenced by the actions of literate populations. We’re in a period where the cutting edge of change has moved from the technology to the literacies made possible by the technology.

Five hundred years ago, Gutenberg presses did not immediately enable people to overthrow monarchies, drive the Protestant Reformation, and invent science as a collective enterprise. The interval between the technological advance of print and the social revolutions it triggered was required for literacy to spread. Print, a technology that leverages the power of the human mind by making possible mass distribution of written documents, required decades for the intellectual skill of decoding those printed pages to spread through populations. The sheer scarcity of painstakingly crafted manuscripts (the word manuscript literally means “written by hand”) had constrained literacy for thousands of years. Thirty thousand pen-and-ink books existed in all of Europe in Johannes Gutenberg’s lifetime, but more than ten million printed books became available within fifty years of his invention. The sudden abundance of printed material meant that the mental know-how that had been reserved for elites for millennia abruptly became available to anybody who was able to put in the effort to learn to read. For decades and centuries after Gutenberg, newly literate populations began to learn what to do with the new media of their time, and then they started to foment the Reformation, institute political self-governance, and systematize the discovery of knowledge.

Digital literacies can leverage the Web’s architecture of participation, just as the spread of reading skills amplified collective intelligence five centuries ago. Today’s digital literacies can make the difference between being empowered or manipulated, serene or frenetic. Most important, as people who are trying to get along day to day in a hyperscale, warp-speed civilization that seems so often to be beyond anyone’s control, digital literacy is something powerful we can learn as well as exercise for ourselves and each other.
Who Needs to Read This Book, and Why?

I know from my own thirty years online and quest to learn from people who are highly skilled in the new media that practical know-how does exist and can be useful (maybe even essential) to:

- Adults who are adept at using online tools and networks, but face challenges of time and attention management, and seek a balance between their physical and virtual environments
- Intelligent but perhaps less knowledgeable and fearful parents of young people who are going online for the first time, or spending more and more time online
- Young people who are immersed in the digital “hanging out, messing around, and geeking out” online that is such an important part of youth culture today, but are ready to learn deeper, broader ways of using social media productively and collaboratively
- People who are old enough to remember the world before it was webbed, and are simultaneously puzzled, attracted, and fearful about new media
- Businesspeople who want their employees to be net smart with each other inside their enterprise as well as social media literate when dealing with customers—net smarts within enterprises are different from social marketing competencies
- Educators who want to help students connect old and new literacies, and think critically about their own media use

While we’re waiting for research to provide more definitive evidence about what our media practices are really doing to our minds and social relationships, I think we can all benefit from adopting some of the rules of thumb discovered by mindful digital media users. Literacy as I am using the term is definitely a skill. But solitary skills are not enough today. Literacy now means skill plus social competency in using that skill collaboratively. Learning how to ride a bike is a skill you have to learn alone, and even if you’re the only person in the world who can ride a bicycle, you could get from place to place faster because of your operational knowledge, along with a working bicycle. If you are the only person in the world who knows how to read, write, or hyperlink, however, your skill is far less useful than it could be. What matters the most with present-day new literacies are not just the encoding and decoding skills an individual needs to know to join the community of literates but also the ability to use those skills socially, in concert with others, in an effective way.
I want to introduce you to new know-how (and how to know in new ways) by sharing what I’ve learned about five literacies that are in the process of changing our world: attention, participation, collaboration, the critical consumption of information (aka “crap detection”), and network smarts. When enough people become proficient at these skills, then healthy new economies, politics, societies, and cultures can emerge. If these literacies do not spread through the population, we could end up drowning ourselves in torrents of misinformation, disinformation, advertising, spam, porn, noise, and trivia. Information overload only begins to describe the problem facing everyone with an email account. The free flows of information that digital technologies have made possible are enriching if used properly, but unhealthy for us as individuals, unproductive for businesses, and toxic for our societies if we don’t know how to take them in (or selectively shut them out), evaluate and assimilate them, and contribute our own participation or collaboration—and perhaps most important, when and why to turn off the device, or tear ourselves away from it.

We need to handle the new flows of knowledge, media, and attention in a healthy, flexible, grounded manner, whether we are older and trying to cope with a world that has changed on us, or just starting out in an era in which the rules are still being written. The well-being of sixteen year olds, sixty year olds, start-up companies, and global corporations increasingly depends on the same know-how and how to know.

How Our Learning Journey Will Proceed

In the chapters that follow, I share specific advice about benefiting from and protecting yourself from today’s always-and-everywhere media. I direct this advice to worried parents, anxious and enthused students, concerned teachers, curious managers, ambitious employees, thoughtful entrepreneurs, reflective online enthusiasts, puzzled policymakers, and technoskeptics who are just trying to cope. If you need to know what to tell your children about life online, need help surviving and thriving in your own online life, or are grappling with the changes that always-on media are bringing to your organization, I offer the following stories, advice, arguments, evidence, tools, and exercises for your use. I offer this book to people of any age who are willing to think for themselves about their part in digital culture.

I can’t give you what you need, however, without some work on your part, precisely because you know better than I do about who you are and where you stand. I can only point out what I’ve learned and what others
THE FUTURE
-of-digital
media...

depends on

YOU

and

US

YOURS...

OURS...

MINE

Is the

INTERNET

making me
MINDFULLY

and

EFFECTIVELY

NOT AS
IMPORTANT...

MORE
IMPORTANT...

always ON!

ACCESS

and KNOWLEDGE

are EVERYWHERE.

...but finding

the GOOD STUFF

is UP TO YOU!

HOW do I

use SOCIAL

MEDIA

MINDFULLY

and

EFFECTIVELY

IMPROMING THE COMMONS

PERSONAL

EMPOWERMENT

. STRATEGIC

ONLINE PRESENCE

MORE

IMPORTANT...

DIS. INFO

GOOD INFO

SPAM

MIS. INFO
This book is for those who want to go DEEPER!

- Productivity
- Practical know-how
- Collaboration
- Integrating physical and virtual lines

Skills

A community of literates

MINDFUL AWARE...

What are you doing?

Why?

HOW DO YOU USE MEDIA?

LEARNING from the MASTERS of this NEW MEDIA!

- Online participation
- Expert interviews
- Writing... research

Social
have discovered, and leave it to you to make decisions according to your own values. Here, I strive for a balanced approach that is neither a techno-utopian sales pitch nor a neo-Luddite moral panic; it is instead a pragmatic stance that takes into account the reality that the preferences and circumstances of each reader will differ.

As one of the earliest adopters of what I called “mind amplifiers” (in 1985) and the person who gave a name to “virtual communities” (in 1987), I have learned that the media I’ve been using with gusto for three decades also have their downsides. Although I’ve traveled across countries and disciplines to consult with a wide variety of media experts, much of what I convey here in terms of practical advice comes from my own experience. I’ve learned to be wary of trying to sell to others the generalizations about life online that I’ve found to be true through my own exploration—because one of the things I’ve learned about social media is that the same activity can be a lifeline for one person and a distracting compulsion to others. There is no single recipe for a mindful life in the digital mediasphere; reflection is required.

One tool that I do feel comfortable generalizing about is the importance of questioning my own communication practices—recognizing which media and mediated social activities I tend to avoid, which ones attract or distract me, and which lead and mislead me, and reflecting on why I react in these ways. I have found through years of trial and much error that the most enriching, least harmful way for me to live in my own computer-mediated world is to cultivate an occasional but ongoing inner inquiry into whether my own activity of the moment is really as significant as what is happening in the rest of my life at each moment. You can’t make microdecisions about how to deploy your attention in the moment unless you have made macrodecisions about how you want to spend your time. And while I’m asking questions, where is my body while my mind scurries through cyberspaces? It’s easy to ask oneself, What do I think I should be doing right now? Answering it usually takes work. The process of trying to address the question in your own context is the work of learning digital mindfulness.

Each of the five literacies I discuss is connected to and in many cases undergirds each other. It’s impossible to separate signal from noise without exercising attention, so mindfulness is a prerequisite to effective crap detection. Similarly, it’s difficult to instigate mass collaboration without network awareness, nor is it easy to participate online without also collaborating. Twitter is a recent example of a social medium that can be a waste of time or multiplier of effort for the person who uses it, depending on how knowledgeable the person is in the three related literacies of attentional
discipline, collaborative know-how, and net savvy. You need to know who to pay attention to when you “follow” other Twitter users, how to participate in the networks of trust and norms of reciprocity among Twitter users that make for social capital, and how to craft messages that others will propagate to their own networks. Attention is a literacy that can thread all the other literacies together and hence is fundamental to the others in several ways, so I’ll start there.

In the first chapter, I connect my own experience, the exercises recommended by others, and what I’ve learned about the underlying neuroscience of attention to the practical literacy of controlling attention. The learning journey here begins with an updated understanding of how attention works, why distraction and multitasking might or might not be the vehicle through which modern media are making us stupid as individuals and shallow as a culture, and then gets right into what to do about the dangers of distraction through examining mindfulness, ancient and modern. I’ll lay the foundations for discussions later in the book about the possibilities of the extended mind—the use of technology to go beyond remedies for attentional deficits to methods of enhancing intellectual performance. Most crucial for you and your power to wield the literacies introduced later, the first chapter will demonstrate how to begin to take control of your most important technological affordance—your attention.

In the second chapter, I’ll show how to use your attention and mine, individually and in concert, to filter out the noise and crap in order to concentrate on the tiny relevant portion of the moment-to-moment incoming tsunami of information. Intention added to attention, and mixed with knowledge of information-filtering tools, work together in a coordinated mind-machine process I call “infotention.” Critical thinking, information filtering, and Ernest Hemingway’s fundamental “internal crap detector” are all about how to use your attention to begin managing the inflow of media. Like the first chapter, my exploration of search and credibility skills as well as attitudes is about the meeting of mental capabilities with the technologies of keyboards, screens, and networks. Together, the first two internally focused chapters are about what my friend Cathy Davidson, educational technology pioneer, calls “your brain on the Internet.”

Moving from the strictly individual mental aspects of life online to the coupling of individual personality with digital culture via social media, the third chapter is about the literacy of participation, or the know-how that empowers the best of bloggers and videobloggers, netizens, Twitterers, and online community participants—those who use digital media to express themselves, socialize, advocate, organize, educate, and grow collective
intelligence. Mirroring the inner-outer powers covered in other chapters, participation is about internal individual skills and strategies, and at the same time, the Webwide aggregation of participation—where the literacy of participation shades into the literacy of collaboration. A “participatory culture,” as media analysts Henry Jenkins and Mizuko Ito put it, is one in which the level of digital participation—from gaming to curating—creates a social setting in which citizens become active agents in cultural production. Conversely, if the level of participation literacy fails to maintain a certain (presently unknown) minimum, a social setting for media use in the future might hark back to the mediasphere of the broadcast age, in which a relatively small population of prosperous, empowered producers broadcast their versions of culture to a much larger, far more passive and less wealthy, less powerful population.

Chapter 4 moves from the personal and interpersonal to the cybersocial. The know-how at the core of this literacy is about the magic of several different flavors of collaboration made possible by networked media. The realms of collaboration are broad and deep, so this chapter offers both a high-altitude map of the territory of online collaboration and close-up conversations with the people who have created famously successful collaborative enterprises. Wikipedians, Flickr taggers, and social bookmarkers are contributing new knowledge in new ways by performing self-interested information practices within an architecture of participation that provides value to all. Virtual community organizers work at the border of media and interpersonal relationships, in a zone where technical knowledge will get you nowhere if you don’t understand online social norms—and can get you much that money can’t buy if you know how these emerging cyber-social forms work. As one of the earliest commentators on cybersociality, I can speak from experience about the benefits and pitfalls of mediated communities.

Collective activities and interpersonal capabilities that nobody dreamed possible have become part of everyday life for millions of people. In 1985, when I participated in an ad hoc online support group for a member of our virtual community whose son had a life-threatening disease, we did speculate that this kind of group might be used in the future by more than the early adopters of networked social communication. Until my “Virtual Communities” article in 1987, there really wasn’t a word or cultural category for strangers who lived in different places yet offered each other sympathy, medical advice, and even financial support. Millions use services today such as Patientslikeme.com and mdjunction.com.
Knowledge creation, political activism, and health support are far from the only ways people are working together with others they have not been able to work with before, in ways and places that were never before possible. Online collaboration may be evolving a third variety of economic production to supplement the market and firm, as scholars such as Harvard’s Yochai Benkler contend: “Who could have predicted that volunteers, working with neither financial incentives as we know them or the management structure of the firm as we know it managed to co-create free, open source software that challenged Microsoft in both the operating system and web browser markets?” A coalition of volunteers who build and improve millions of articles in hundreds of languages as part of a free encyclopedia would have sounded preposterous even to enthusiasts when the Web first became widely known in the mid-1990s. Today, succeeding online—in business, personal life, and the public sphere—can entail knowing how to find, participate in, and grow your own virtual community.

“Collective intelligence” and “crowdsourcing” are other emergent terms to capture newfangled forms of collaboration. People who don’t communicate directly as they do in virtual communities can nevertheless aggregate individual efforts to create useful public goods. By bookmarking and tagging Web sites that contain useful information, people are creating a kind of mass-curated knowledge that would have been impossible before the Web. The Library of Congress, lacking the funds to exhaustively describe its photographs of U.S. life, put them up on Flickr, where volunteers tagged millions of them—for no financial return. Future forecasters are beginning to use the voluntary, enthusiastic, communal efforts of online gamers to foresee and attempt to solve world-scale problems. New ways for people to collaborate are invented on an ad hoc basis every day. For example, when computer scientist Jim Gray went missing at sea, his friends obtained recent satellite images of that ocean region from NASA and Google; Microsoft and Amazon engineers divided the images into a half-million separate pictures; more than twelve thousand volunteers searched the photos. Gray was never found, but a new kind of crowdsourcing popped into public consciousness.

Chapter 5 is about the multifaceted knowledge of networks that comes in handy so often today. Network savvy is exceptionally multidisciplinary. Becoming network aware has to include some basic knowledge gained by sociologists who have studied the way structural dynamics of networks influence how people relate via social networks; another bit of sociology, the famous “small-world network” that explains how every human being is connected to every other human, applies directly to online network
building. Now that more than half a billion people have their own Facebook pages and more than five billion carry mobile phones, sociologists have also been tracking a shift of central importance to digital citizens: the emerging phenomenon of “networked individualism.” Political scientists and sociologists alike have been the specialists who use the term “social capital” to describe the power of populations to get things done together outside formal laws and institutions, but now every knowledgeable Web user needs to understand how online behavior can grow or obstruct social capital. Small worlds, networked individuals, and social capitalists are all part of the emerging culture of digital publics. The politics and psychology of privacy—and why knowledge of privacy protection is critical in an era of transparency—is another case of an issue that small groups of specialists debated a decade ago, but now poses daily challenges for parents, students, and citizens. It’s hard to be much of anywhere in the twenty-first century and not recognize what University of Southern California professor Manuel Castells succinctly argues: that networks matter.16

The shapes of our connections and what we know about them are not only the subject matter of a developing new science of networks but also matter in the ways that technological networks amplify and extend human social networks. Technological architectures and the media practices of ordinary people suddenly matter very much in the personal realms of liberty, opportunity, and the possibility of justice.

By the end of chapter 5, you should have a set of mental and social tools to apply to your own advantage—and the benefit of others. You’ll have the knowledge to confront the bigger question of what social media mean cognitively and socially. The final chapter frames these practical literacies in relation to the broader issues of privacy, remix culture and copyright conflicts, and the role of today’s citizens in the digital public sphere. It also provides advice for parents and a bullet-point summary of our learning journey.

**Attention! The Fundamental Literacy**

Last month, I picked up my twenty-six-year-old daughter at work to take her dinner. Here is our conversation, verbatim:

Me: “Honey, is it necessary for you to spend our entire time together on your BlackBerry?”

She: “Daddy, if I don’t deal with today’s work emails before dinner, I’m going to fall behind.”

Me: “Welcome to my world. I think.”
That exchange started me pondering previously somewhat-separate issues that had been on my mind. On the day I met up with my daughter, my university students and I had been contending with the attention issues raised by their use of laptops in class. I can remember when “you’ve got mail” was, for most people, a cheery and inviting message. Now I was seeing how my daughter was already on a digital treadmill I know well, and I know that when I travel, I fear the hundreds of messages in my in-box when I return. At home, my wife frequently has to finish her online messaging before she turns away from her computer to greet me when I walk in the door. I know that I have been guilty of the same kind of social media delay in face-to-face sociability with the most important person in my life; I often have to finish my email, instant message, tweet, text, bookmark, tag, post, or comment before I greet my wife when she walks in the door. And long before our daily lives were colonized by pocket-size communication gadgets, I regularly wondered why my whole family jumped to answer a ringing telephone when we knew the caller would roll over into voice mail if we chose not to interrupt our dinner conversation.

These concerns are not unconnected, of course. And neither are they wholly new in a larger sense, although novel social media behavioral challenges seem to pop up every day. We’ve been reallocating our attention in response to new communication media for a long time.

Once I started looking for everyday behaviors where communication technology use affects attention, it didn’t take long to perceive the outlines of the large-scale shifts in attentional practices and norms that we all see happening around us in many ways. I understand my daughter’s fear of the overflowing email in-box, as do most white-collar adults in the industrialized world. I talk to my wife while she is texting (and vice versa). You don’t have to wear a white collar to have sent one of the trillions of text messages transmitted worldwide this year. My daughter had six instant messaging windows open while she chatted on the phone and worked on a school assignment (and I let her do it because she is an excellent student, so maybe I helped set the stage for her BlackBerry habit). I see how all eyes in my university classroom are not on me but rather on laptop screens. I started noticing myself at the same time I was observing the attentional behaviors of others; I began to think in new ways about how people deploy their attention when I started looking at the way my own thinking processes had changed since I turned my typewriter in for a personal computer (PC), and then plugged my PC into a modem and thus my first online network.

Although I originally started using digital tools in order to type more efficiently, I soon learned that the transition from electric typewriter to word
processor entailed more than just a change in office machinery. Not long after I began using computers and networks, I started writing about how it felt to use them. The ways in which our uses of social media affect our minds, relationships, and society have been the overarching theme of the books I’ve written for the past twenty-five years. I started to teach courses on social media five years ago because I recognized the importance of helping students examine their own psychological and social issues around digital media use. Teaching and learning with students in classrooms at Berkeley and Stanford brought me into direct contact with (and provided a living laboratory in) generational differences in attention patterns.

Probably the first advice I would give unequivocally, based on my own decades online, is that in a world where information is abundant and veracity is not guaranteed, while gatekeepers, authorities, and fact-checkers are scarce, each of us as individuals and all of us as a society have no choice but to learn how to think critically about what we pluck from the information flow, how much we are to believe what we find or are given, and whether we should even devote any mind share to it at all.

Although I hope to explain what is known about the cognitive effects of using digital networked media, including the research and controversy over multitasking, this is not a book on multitasking, pro or con, or how to manage your time better; there are plenty of those. Neither is this book going to deal with the issue of attention deficit disorder. Knowing when as well as when not to multitask is a key part of the digital literacy toolbox—and you don’t need to have a disorder to be confused about how to react to rapid social and technological changes. If you aren’t a little confused, maybe you aren’t thinking deeply enough about the bigger picture. For the purpose of my inquiry into a broad range of literacies, concentrating too much on the important but not all-encompassing issue of multitasking risks missing larger issues about a broad range of attentional habits that are dying and aborning.

Most people in the world recognize, at some level, that a massive shift is taking place in the way we direct, fail to direct, fragment, or time-share our attention in conversations, classrooms, and while walking down the street. Many are uneasy about this transformation. Some, like Nicholas Carr in his article “Is Google Making Us Stupid?” and his book *The Shallows*, believe we are losing an essential ability to focus and dive deep.17 The sociotechnological questions Carr addresses may have been made possible by the digital devices a majority of the earth’s population now carry, but the real changes driving this shift are occurring in human minds and between human beings, not in microchips. The way we communicate today is altering the
way people pay attention—which means we need to explore and under-
stand how to train attention now, so that we, not our devices, control the
shape of this alteration in the future.

It’s not that multitasking is always bad (except when it is—like when
you are driving a car), or continuous partial attention (such as surfing the
Web while talking on the phone) is always rude and inefficient. It’s that
too few have learned and taught to others the skills we need to know if we
are to master the use of our attention amid a myriad of choices designed to
attract us. A significant part of the population has not yet learned to decide
when it is appropriate to share multiple lines of attention and when single
focal point is necessary (and I’m not just talking about etiquette here but
rather about efficacy in business and personal lives), nor have many people
studied how attention can be trained. Who can blame us? We’ve been busy
trying to catch up with the way our uses of digital computers, worldwide
webs, and mobile cameraphones have restructured our lives. (A 2010 survey
found that one in six adults has physically bumped into someone or some-
thing while talking or texting on their mobile phone.)

Fortunately, learning to gain control over attention is a skill that people
have been perfecting for thousands of years, and it can start with some-
thing as simple as paying attention to your breathing. Eventually, twenty-
first-century elaborations on older mind tools have to be learned, but the
beginner in traditional meditation discipline and modern digital infoten-
tion training both start in the same place: elementary mindfulness exercise
involving attention to the physical breath.

One of the most critical things to know about mindfulness training is
that even the smallest amount of attention is immeasurably more useful
than none at all. Step one in gaining control of attention is to simply notice
it. Getting started in this kind of reflective thinking is the hardest part, and
yet it’s also easy to begin. After embarking on what should become at least
occasional self-examination, it’s time to turn the tool of attention control—
however early you might be in your self-training—to the task of finding the
information you need at the moment you need it, learning what you need
to learn and forgetting what you don’t need, and most important, learning
how to filter out the bad info.

Calibrating Your Crap Detector: What You Pay Attention to After You Pay
Attention to Attention

The answer to almost any question is available within seconds almost any-
where on earth, courtesy of the invention that has altered forever ancient
rules about how we discover, store, and classify knowledge: the search engine. People don’t just use online search for homework or business intelligence. Search has penetrated to the quotidian details of daily life like finding a plumber or ordering a pizza. With location-aware devices, information is now available that takes into account where you are, what time it is, which direction you are pointing your device, and what your social network thinks about it. If you have a smart phone, you not only can find the nearest place to eat vegetarian cuisine but also find out what other people have to say about the food and service, get visual and vocal directions to your destination from where you are now standing, and view a photograph of what the block you seek looks like. When today’s infants grow up, they will be amazed that their parents’ generation could ever get lost, not be in touch with everyone they know at all times, and get answers out of the air for any question.

Materializing answers from the air just in time and just in place turns out to be the easy part—the part a machine (a really, really big machine like the Web) can do. The real difficulty kicks in when you click down into your search results. At that point, it’s up to you, the human who is using the machine, to sort the accurate bits and the ones that have immediate relevance for you and your circumstances from the ignorantly or maliciously inaccurate information. While our public schools do a poor to fair job preparing students for life in the nineteenth and twentieth centuries, instruction in online search and credibility testing for our current milieu is not taught in most classrooms.

Unless a great many people learn the basics of online crap detection, and begin applying their critical faculties en masse and soon, I fear for the Internet’s future as a useful source of credible news, medical advice, financial information, educational resources, and scholarly as well as scientific research. Some critics argue that a tsunami of hogwash has already rendered the Web useless. I disagree. We are indeed inundated by online noise pollution, but the problem is soluble. The good stuff is out there, if you know how to find and verify it. Basic information literacy, widely distributed, is the best protection for the knowledge commons; a sufficient portion of critical consumers among the online population can become a strong defense against the noise-death of the Internet.

The first thing we all need to know about information online is how to detect crap, by which I mean information tainted by ignorance, inept communication, or deliberate deception. Learning to be a critical consumer of Web info is not rocket science. It’s not even algebra. Becoming acquainted with the fundamentals of Web credibility testing is easier than learning
the multiplication tables. The hard part, as always, is the exercise of flabby think-for-yourself muscles.

Learning how to make use of huge, unsorted, continually changing flows of information without becoming overwhelmed is partly an application of minimally trained attention skills to a simple question in relation to every assertion, factual claim, or opinion: How do I know I should trust this information as accurate? The specifics of examining the credibility of information effectively are as simple as looking for an author’s name somewhere on the page in question and submitting it to a search engine, and as complicated as learning to use one’s attention in conjunction with the variety of increasingly powerful automated filters that are becoming available. The specific combination of learned attentional skills and learned information technology know-how is an important new aspect of the digital literacy I call infotention.

In the second chapter I introduce an increasingly significant learning tool known as critical thinking that I certainly didn’t invent but that has grown to be vitally essential in the many-to-many, anyone-can-publish era. I’ll look at how people actually do assess the credibility of what they find online. I’ll talk to experts in search and credibility, consider the utility of crowdsourcing your filters, and zoom way back to illustrate how the nature of knowledge, information gathering, and meaning making are changing.

When you’re on your way to gaining control of your online attention and have begun to practice crap-detection skills, I turn from “this is your brain on the Internet” to “this is what the Internet enables people to do together.” From the cognitive to the social, I’ll shift our attention to the technology and sociality of participation and collaboration, focusing on the skills digital citizens need to master in order to take part in or instigate mass collaboration.

By sampling strategies and understanding the benefits of many different kinds of online collaboration, I hope to help you try on collaborative mindsets and ways of using the media freely available to you. Wiki thinking is one form of distributed cognition that has only become possible in recent years. Scholars who indulge in social bookmarking contribute hints about the skill sets ordinary digital citizens ought to have when seeking and trying to make sense of information. Tens of millions of online game players are having fun, and in the opinion of some well-respected business leaders, some of them are honing the collaborative talents essential in knowledge-based enterprises. Huge corporations are crowdsourcing design by asking their customers to help create the products they want. From each of these different milieus, I draw practical lessons regarding the social competencies
we need to benefit from the Web’s architecture of participation. The following two chapters, on participation and collaboration, introduce the individual and group aspects of collaboration literacy.

**What It Takes to Participate in Participatory Culture—and What You Get Out of It**

If print culture shaped the environment from which the Enlightenment blossomed and set the scene for the Industrial Revolution, participatory media might similarly forge the cognitive and social environments in which twenty-first-century life will take place. Knowing that you have a printing press, broadcasting station, community hall, marketplace, school, and library of all knowledge in your pocket—and knowing how to use it for your own benefit—is what makes the difference between a consumer of electronic gadgets and an empowered citizen.

Participatory media include every online service that enables individuals to create as well as consume content online. Media as distinctly different as YouTube and World of Warcraft share three characteristics:

- Many-to-many media now make it possible for every person connected to the network to broadcast as well as receive text, images, audio, video, software, data, discussions, transactions, computations, tags, or links to and from every other person. The asymmetry between broadcaster and audience that was dictated by the structure of predigital technologies has changed radically.
- Participatory media are social media whose value and power derives from the active participation of many people. This value derives not just from the size of the audience but also from people’s power to link to each other, to form a public as well as a market.
- Social networks, when amplified by information and communication networks, allow for broader, faster, and lower-cost coordination of activities.

People who make even the most modest contributions such as correcting a spelling error on Wikipedia or tagging a photo think of themselves differently from those people who only passively consume the cultural material broadcast by others. A participant is active. A consumer isn’t practicing, even in a small way, the skill that is at the foundation of building social capital online—for contributions are often signals to others that it would benefit them to pay attention to and share with you.

The eager adoption of Web-based media by millions of young people around the world demonstrates the strength of their desire—unprompted
by adults—to learn digital production and communication skills. According to a 2005 survey by the Pew Internet and American Life Project, “The number of teenagers using the internet has grown 24% in the past four years and 87% of those between the ages of 12 and 17 are online.”¹⁹ This interest by U.S. (and Brazilian, British, Chinese, Indian, Japanese, Persian, etc.) youths in media production practices might well be a function of adolescents’ needs to explore their identities and experiment with social interaction—and can be seen as a healthy active response to the hypermediated environment they’ve grown up in.

Whatever else might be said of teenage (and any age) bloggers, dorm-room video producers, or the millions who maintain pages on social network services like Myspace, Facebook, and Google+, it cannot be asserted that they are passive media consumers. They seek, adopt, appropriate, and invent ways to participate in cultural production. Another recent Pew study found that more than 50 percent of today’s teenagers have created as well as consumed digital media.²⁰ This introductory chapter, then, is for those avid young digital media makers (and their parents and teachers) as well as older Web surfers who want to know how to dive deeper (or at least less shallowly) into what the Web has to offer. I do this in the knowledge that addressing the needs of those who are not able to participate in cultural production—the other half of the digital divide—is still an important task. Although significant barriers remain in regard to economically marginal youth and adults, the knowledge and advice in this chapter is geared toward the educational needs and opportunities of the hundreds of millions of people around the world, of many nationalities and socioeconomic levels as well as all ages, who have access to digital media and networks.

Senator Trent Lott lost his position as majority leader of the U.S. Senate, George Allen lost his election to the Senate, and CBS news anchor Dan Rather was forced to retire, all because of the way informed participants used email, blogs, and other participatory media to organize.²¹ Participation is power, and any of the more than two billion people who have Internet accounts can learn to wield that power. This chapter looks at how and why to be an active, informed participant in digital culture, and sets you up for the next interconnected literacy—the art of online collaboration.

Clueing in to Collaboration: Making Virtual Communities, Collective Intelligence, and Knowledge Networks Work for You (and Us)

If I had to reduce the essence of Homo sapiens to one sentence, I’d propose: “People create new ways to communicate, then use their new media to do
complicated things together.” Why we act in concert is the big question. People do things together for a rich mixture of reasons, and Web-based collaboration tools are particularly important in this regard, because wikis and bulletin board systems (BBSs) enable people to collaborate in ways that challenge basic assumptions underlying modern economic theory and contradict older stereotypes regarding human motivations to cooperate.22 The current story that most people tell each other about how humans get things done focuses on the well-known flavors of self-interest that make for great drama—competitive struggles for survival, power, wealth, sex, or glory. I see the outlines of a new narrative emerging, however, in which competition is still central, but its place on our mental map shrinks a little to make room for new knowledge about cooperative arrangements and complex interdependencies.

Starting with the Web’s invention (which its creator refused to patent and insisted on giving to the public domain), and continuing with efforts such as the South-East Asia Earthquake and Tsunami Blog, some significant online social behavior suggests that in addition to financial compensation and other forms of naked self-interest, people do things together for fun, mutual enrichment, the love of a challenge, out of compassion, and because we sometimes enjoy working with others to make something beneficial to everybody.23 This chapter explains how the Web’s architecture of participation makes new forms of collective action possible, asks some of the superstars of mass collaboration how they work their magic, and lays out what I’ve learned from twenty-five years of participation in as well as observation of the online activities now called “social media.”

The power of sociality stems from human not technological attributes, but tools are created in order to leverage human attributes; any tool that can help humans overcome barriers to cooperation works because it augments an essentially human skill such as persuasion, education, or collaboration. Online social networks can be powerful amplifiers of collective action precisely because of the specific ways they extend the power of human sociality. This augmentation is often but not always healthy. Any tool that expands human capabilities also makes it possible for some of our nastiest predilections to operate on new scales as well. To be sure, gossip, conflict, slander, fraud, greed, and bigotry are part of human sociality, whether it takes place at the village well or in a virtual world, and those parts of human behavior can be amplified too. But altruism, fun, community, collective action, and curiosity are also parts of human sociality—and I propose that the Web is an existence proof that these capabilities can
be artificially extended. Indeed, I agree with those who contend that our species’ social inventiveness is central to being human.

The parts of the human brain that evolved most recently, and are connected to what we consider to be our “higher” faculties of reason and forethought, are also essential to social life. This is no accident; it appears that human brains and human social behavior shaped each other’s evolution. The neural information-processing required for recognizing people, remembering their reputations, and learning the rituals that remove boundaries of mistrust and bind groups together, from bands to communities to civilizations, may have been enabled by (and driven the rapid evolution of) the brain structure unique to mammals—the neocortex. Humans in particular appear to have evolved brains that are optimized for social activity. Is it any wonder that we’re now designing social technologies?

Our immediate primate ancestors left the relative safety of the forest to compete with megapredators and saber-toothed everything on the open savanna. *Homo erectus* couldn’t run fast, fly, or emit a stream of stinky fluid. They didn’t have claws, fangs, or armor. But a couple hundred thousand years ago, these creatures started to outsmart the merely instinctive pack animals by improving their ways of doing things in groups. They coordinated defense and food gathering, and those who were better at participating in or organizing this coordination—probably by learning some new code like spoken language—passed along more of their genes. Homo sapiens evolved to favor, along with the good looking and strong, the most able communicators, and those who could coordinate or at least abide by cooperative efforts. It pays to keep in mind the biological and historical roots of the human drive to cooperate—and how we’ve always invented ways to overcome hurdles to cooperation—when studying the modern arts of mass collaboration.

Collective knowledge gathering was one of the capabilities that most excited me when I first wrote about virtual communities in 1987: “If, in my wanderings through information space, I come across items that don’t interest me but which I know one of my group of online friends appreciate, I send the appropriate friend a pointer to the key datum or discussion.” Now, entire communities exist for the purposes of knowledge sharing and organization, from social bookmarking services such as Diigo.com and Delicious.com, to question-answering forums such as Quora (which calls itself “a continually improving collection of questions and answers created, edited, and organized by everyone who uses it”) and Formspring. When I recall the days I used an acoustic modem at 110 bits per second to download glorified library catalog entries, the notion of free search engines,
free collaboration tools, and voluntary knowledge-building collectives still seems as science-fictional magical as the hyperspace drive in movies and television shows. They are now indispensable everyday tools for billions of people. Those who know how it’s done, as always, gain an edge.

Meet Jane McGonigal, for one, who creates massive multiplayer “alternate reality games” that take place in the physical world as well as cyber-space, involve thousands of people worldwide, and tackle real global-scale problems through playful collective intelligence. Or Wikipedia cofounder Jimmy Wales, who spends most of his time traveling to the physical hubs of Wikipedia communities, getting to know the people who have used an ultrasimple online tool to create a free encyclopedia with millions of entries. Every programmer also knows about Linus Torvalds, who sparked the effort globally to create free and open-source software. Tim Berners-Lee didn’t ask permission of any central authority, nor did he require any technology provider to rewire the Internet, when he passed around the code for hyperlinks and Web servers that led to the explosive growth of the World Wide Web—just as Ken Thompson freely spread the UNIX operating system that made the Internet possible by sending out the code (then in the form of big reels of magnetic tape) with the appended note, “Love, Ken.”

Douglas Engelbart envisioned, invented, and persuaded others to invent what we know as the PC, multimedia, and hypertext because he felt it was his duty to improve people’s power to cooperate.

All these superheroes of cybercollaboration knew a few simple things that the rest of us can benefit from learning about, such as how to:

- Create a variety of ways to contribute and give volunteers attractive roles
- Enable self-election where people choose what it is they want to work on
- Give participants platforms to work on together for mutual interest
- Acknowledge contributors
- Make decision making transparent (if not necessarily democratic)

In the chapters to come, I’ll share these and other examples of collaboration lore that I’ve picked up from these virtuosos.

It’s possible to master the art of controlling attention while you sit alone in a room, but it isn’t possible to participate, collaborate, or crap detect without taking advantage of both social and technological networks. Understanding how networks work is one of the key survival skills of the twenty-first century. The next chapter pulls together network science, sociology, practical Facebooking, and the art of online self-presentation to provide both a framework for thinking about and tools for acting effectively in a networked world.
What You Need to Know about Network Smarts—from Small Worlds to Privacy Settings, from Weak Ties to Social Capital

New knowledge about the nature of networks is essential for getting around in this century because digital data and human communication networks erase barriers and multiply possibilities for one of our most powerful capabilities; our sociality. The science of networks emerged in the 1990s when large amounts of data about all kinds of phenomena, together with computer tools to make sense of this information, enabled scientists of different stripes to recognize common characteristics of networks that shape societies, ecosystems, languages, or online social media. This chapter flies over the wildly interdisciplinary landscape of network studies, zooming in on those features that can inform the behavior of digital citizens.

Some of the new knowledge comes from sociologists who were looking at social networks before the Internet was created. The idea of “six degrees of separation,” for example, was popularized through a widely reported sociology experiment by Stanley Milgram that used paper letters in the U.S. mail to demonstrate how each human being is connected to every other human being by a surprisingly small number of steps. Decades later, physicists and sociologists noted that small-world networks manifest in widely separated disciplines. The networks of relations in ecosystems, the relationships between words in a language, and the human networks that people create together wherever they congregate all exhibit similar structural characteristics. More recently, social network analysts have presented evidence for “contagion” in social networks: we appear to be influenced by the behavior of people we don’t know directly, but who know someone we do know directly.

Electronic engineers and computer scientists have made major contributions: Sarnoff’s, Metcalfe’s, and Reed’s laws of networks explain the extraordinarily rapid rise in value of business enterprises such as eBay and Facebook—and point to entrepreneurial opportunities for anyone who can come up with a new platform for human group formation. When you learn how to look at them, you’ll see how discoveries emerging from this new interdisciplinary science point to real-world knowledge that can be useful to mindful digital citizens.

Manuel Castells, a scholar who studies social aspects of networked media worldwide, argues that networks matter now because new technical networks dramatically multiply the power of age-old human cultural tools of sociality, politics, and economics. Castells’s insight is worthy of close...
attention because one key to the successful use of online social networks lies in understanding how online capabilities can be used to enhance social behavior. The shapes of our interpersonal connections matter, Castells maintains, because of the ways technological networks enable the human social networks that enmesh each and every one of us to work more rapidly, in more settings, across more boundaries, than ever before. When you read about the irate airline passenger who organized a protest on Facebook and prompted Congress to consider a “passenger’s bill of rights,” or the Iranian government using the Internet to track down and arrest protesters, you are hearing about how the politics of networks affects the lives of ordinary people.\textsuperscript{34} Technological architectures and people’s networked media practices suddenly matter very much in the personal realms of liberty, opportunity, and the possibility of justice.

I didn’t let my child loose on the streets without teaching her about traffic and looking both ways. Similarly, I don’t like to see otherwise well-educated people loose in digital culture without knowing something about what makes a small-world network work or why a portfolio of weak ties is important. Networks particularly affect privacy and reputation—the places where our private lives intersect or collide with public knowledge, whether or not we know what to do about it. In previous eras, it may have been true that “it’s not what you know but who you know.” Today, \textit{how you know who you know} matters as much as who you know, and one of the most valuable traits a person could have in a twenty-first-century organization is a knack for knowing “who knows who knows what.”

Net smarts are not just vital to getting ahead; you need this knowledge to keep from falling behind. This caveat may well be an argument that our use of technology has grown way beyond our control, but it seems to be a fact of life whether or not we particularly like the idea. And whether or not we do anything about it, the webbed world is full of information about us that is provided by other people, including their opinions about us—the fact of life we know as reputation. To an individual, reputation is a powerful influence on how well one gets on in life, and it’s not wholly controllable by the person it impacts. Human sociality has always been thus; indeed, some social scientists suspect that gossip may have been involved in the transition from primate social grooming to human language.\textsuperscript{35} Now, however, instead of whispering at the watering hole or scrawling your name on a bathroom wall, reputation assassins can leave indelible and searchable smears on the Web. It turns out that digital networks can also amplify some of human beings’ less laudable social behaviors. The art of “presentation of self” becomes all-important when you are trying to wrest control of your
reputation from others. As Microsoft Research digital anthropologist danah boyd put it in a conversation with me: “Today people need to frame their own stories, creating a positive living presence on the Web” as the most effective way to put a positive spin on what search engines turn up around your name.36

To groups, social capital is the name for the social agreements and communication networks that allow people to get things done together informally, without state or strictly economic institutions. Social scientists such as Harvard University professor Robert Putnam claim that social capital—the mesh of traditional agreements that enable cooperation, and the networks that carry reputation information and thus lubricate transactions—is a key factor that influences the way one society thrives and another struggles.37 Now that new kinds of human networks emerge online around mutual interests as well as the traditional community catalysts of physical proximity or sectarian allegiances, and social activities are mediated through Facebook, Twitter, YouTube, and Flickr, new ways to cultivate social capital become available. Ask the people who raised $250,000 from Twitter users in two weeks in 2009 to sponsor clean-water projects in impoverished villages.38

Network knowledge derives from a variety of disciplines that had previously not been connected (digital networks and human social behavior), and the skills based on this knowledge include a wide variety of situations. I’ll restrict my focus here to knowledge, wherever it is derived, that can be applied directly to mindful life online today. When you grasp the basics of social network analysis, you’ll know that growing a diverse personal learning network (PLN, as the enthusiasts call it) often is more useful than having a large, homogeneous social network. If you know how others seek to use your digital footprint to market or track, you have the power to protect your privacy and reputation. If you work in an organization, knowledge of the power of “structural holes” that connect networks can help you position yourself as a profitable conduit for good ideas.

None of this knowledge is especially difficult to understand or put into practice. It’s just that until now, those of us who want to use network smarts to thrive in digital culture without losing our humanity have had to put the puzzle pieces of theory, practice, and lore together for ourselves. This book is an early attempt to bring these connected but disparate pieces of knowledge together, and surely (I hope) won’t be the last. In the future, basic network literacy ought to be a part of school curriculum.

When I started thinking about the relationship between my personal networked media practices and my own thinking and attention, I realized
that I’ve been thinking about thinking tools—how they work, what they mean, and how do I get my hands on them—for decades now. Understanding how present-day PCs and networked media originated in the mid-twentieth century establishes a good foundation for twenty-first-century skills; besides, it’s a fascinating story. The tools I used to write this book, and possibly the medium by which you heard about it, grew out of the dreams of people who specifically wanted to use computers to “augment human intellect” and link personal mind amplifiers into an “intergalactic network.” These dreamers weren’t in the mainstream of the computer industry or computer science. They were people who wanted digital thinking tools for their own use as well as the common good, and set out to create them, even though conventional wisdom held that digital computers were for scientific calculation and business data processing—payrolls and the like. My own career as a writer and teacher was powerfully affected by encounters with some of the people who created the first PC and computer-mediated communication network.

Before I ask you to take my word about what I’ve learned, I think you’ll benefit from hearing how I learned what I propose to teach you.

Dreaming of Mind Amplifiers: A Personal Journey

By the time the first PCs came along, I had been spending my days facing a typewriter and blank page for nearly a decade. I knew little about computers, but I was always interested in the future of media. And it didn’t seem too far-fetched to think about using electronics within my lifetime for what Peter Drucker later called “knowledge work.”

Since the 1970s, I had been intrigued by the idea that computers—most of which were still programmed through punched paper cards—could be accessed through telephones. What if I could go back to the library multiple times a day, I mused, by plugging my telephone into the library’s computerized database—a feat that wasn’t possible for me then? I had been tracking the “videotext” experiments that big publishers along with broadcasters like Knight-Ridder and Warner were experimenting with: a soon-to-come way of delivering customized information to people in their homes by using telephones as input devices and televisions as output devices. The whole system was centrally controlled, with users punching buttons on their telephone keypads in order to navigate through menus of prepared information. Billions of dollars were spent on videotext experiments, but none of them included ways for the medium’s users to communicate with—much less create content for—each other.
There was a sense of something in the air when the microprocessor was invented in 1971, but the acceleration rate of the cultural change to come wasn’t visible yet to nonengineers like me. The first home computer kit, the fabled Altair, wouldn’t be available until 1975 (inspiring Bill Gates to drop out of Harvard to write software for it). It’s hard to convey to people who didn’t live through it how impossible the first decades of the PC would have seemed if a time traveler had tried to tell us what was ahead. Ordinary humans did not take front-page news photographs with phones they carried in their pockets, or make their own brand of electronic entertainment and send it out on their own accord to people all over the world. That’s what big newspapers and television networks, book publishers, and record labels were for.

In 1974, I came across Ted Nelson’s self-published book *Computer Lib*, a talismanic object for the *Whole Earth Catalog* predecessors of cyberculture; like the *Whole Earth Catalog*, which had been published six years prior, in 1968, *Computer Lib* was oversize, full of illustrations, sidebars, and nonlinear text, and looked like it was pasted together on a kitchen table. Nelson foresaw a future of personal empowerment as soon as everybody could afford to own a microcomputer; he also envisioned a vast network of documents and media, all connected with hyperlinks. I didn’t interview Nelson until a decade after I stumbled on his book, when the revolution he foretold was well under way. That’s the aspect of exponential growth that can sneak up on you—progress in the 1980s was much faster than the development of personal computing in the 1970s, and by the late 1990s, computing devices in toys were becoming literally billions of times more powerful than the Department of Defense behemoths of the 1960s.

In 1974, a company called the New York Information Bank also appeared on my radar (which in those days consisted mostly of trips to the library and telephone calls to sources). I went to the Information Bank’s office—a two-room suite in one of the first high-rise apartment-office buildings in San Francisco. I wasn’t one of the institutional customers the company was seeking, but the man who ran the office found my enthusiasm convincing. He directed me to a desk, where I was able to place one of those big Ma Bell landline handsets that could be used as a hammer if necessary into a rubber coupling device atop a large box full of, presumably, electronics. My modem sent a coded series of beeps and boops to a computer in New York that was listening on a long-distance phone line, and that responded with the characteristic shrieks, static, and electronic whooping noises that old-time modem users will recall. What I gained for all that work was access to a slightly amplified card catalog. I could find article references and their
summaries. The speed of data transmission was around 110 bits per second, so downloading even a relatively short ten- or twenty-page article took long enough for me to go out for coffee while I was waiting. But I was able to print out references on whatever topic I was pursuing at that time as a freelance writer, and then bring the printout with me to the library. I felt like a man from tomorrow when I thumbed the paper card catalog at the public library, printout in hand.

In the late 1970s, two small companies—Apple and Microsoft—and their new category—PCs—began to attract press attention, along with scores of enterprises that few remember (I recall wondering whether to get the Apple II or Exidy Sorcerer, for example). I went to one of the first PC conferences, the legendary Computer Faire, convened in San Francisco's Civic Center by founder Jim Warren, who rode around the vast convention hall floor on roller skates, weaving through the hundreds of nerds (before the word was vaguely complimentary). I understood little of what was going on, and was not that strongly attracted to it. There wasn’t much you could do with the first PCs except play games and program in the BASIC language—Gates's first product. But I picked up a flyer about using PCs to write with, and that did attract my interest.

In the mid-1970s I was using the state-of-the-art correcting electric typewriter. By pushing the right button, I could make my typewriter magically type backward over the last line I had entered with a white ribbon that overwrote my previous typing. The notion that I could move my cursor around and manipulate entire blocks of text was extremely appealing in a brute-force labor way. At that time, I typed out a page of draft, corrected it with pen, and sometimes physically cut and retaped different parts of the page. Then I had to retype the page. To me, not retyping a page was enough in itself to pursue my investigation of the flyer I had picked up. I was far too unschooled to understand much of what I read in the enthusiasts’ publications, and nobody else was interested in paying me to do a story on using PCs to write with. Yet I drove from my home in San Francisco to Cupertino, about forty-five minutes away, to talk with a fellow named Jef Raskin, an employee of an Apple Computer Company, which was still small enough to occupy two buildings. Raskin later initiated the project that became the first consumer PC with a point-and-click interface: the Macintosh.

Indeed, Raskin had written his own program for using one of Apple's first PCs as what I learned to call a “text editor.” Computer programmers knew about screen-based text editors because that was what they used in the post-punch-card days to edit programs on television-like screens before
submitting them to the computer. Unfortunately, as Raskin told me, the visionary founders of Apple were convinced that their users would mostly use the machine to play games and program in BASIC. So the hardware only supported uppercase letters.

Toward the end of 1977, one of the magazines I scanned (in the old-fashioned sense) at the public library, *Scientific American*, published an article by Alan Kay titled “Microelectronics and the Personal Computer.” When I came across the article a couple years after it was published, the first paragraphs of Kay’s piece jumped out at me. As Kay famously noted, “The best way to predict the future is to invent it,” which apparently he and his colleagues were doing at a facility within an hour’s drive of my office.

The article included photographs of a place where people actually moved paragraphs around by pointing to them on a screen, using a device called a mouse. The Xerox Palo Alto Research Center (PARC), designed in a style I later characterized as “Aztec modern,” seemed like Wonderland, Atlantis, and Shangri-la rolled into one. Kay zoomed me back to a much-larger vision than the current popular fascination with the boy wonders and their jillion dollar start-ups—a vision of personal digital media as tools for powerful new means of creating, communicating, teaching, and learning. “The future increase in capacity and decrease in cost of microelectronic devices will not only give rise to compact and powerful hardware but also bring qualitative changes in the way human beings and computers interact,” Kay observed. “In the 1980’s both adults and children will be able to have as a personal possession a computer about the size of a large notebook with the power to handle virtually all their information-related needs.”

Although I had been unaware of it, Kay and others had been working on a highly visual, networked PC system since the early 1970s. By that time I was juggling jobs as a freelance writer. Before I got my hands on a point-and-click computer, one of my freelance jobs was as a part-time staff writer at the Institute of Noetic Sciences, a think tank devoted to the study of consciousness. It was at IONS, as we called it, that I started using a primitive screen-based PC program known as Wordstar. I initiated a campaign to land a writing job at PARC. I found the telephone number of PARC’s public affairs director. She has since passed away, but I kept in touch with her for years because she gave me an important break. I called her every Friday and asked if she had any freelance writing work. On the third or fourth Friday, she said that they needed someone to work all weekend on scripting a slide show for a new product demonstration. After that, she started hiring me to help their wizards compose something about the technologies they were too busy inventing to write about.
It didn’t take me long to find my way to Bob Taylor, who was then still the director of PARC’s Computer Systems Laboratory, where the legendary Alto (acknowledged to be the first PC), the Ethernet network, and the laser printer had all been invented, and the graphical user interface was developed, extending Engelbart’s ideas. I drove for forty minutes each way from my home in San Francisco to PARC in order to use an Alto to write as well as talk with people like Taylor. And they paid me for it. It was heaven.

Taylor had been a twenty-six-year-old research director at the Department of Defense’s Advanced Research Project Agency (ARPA) in the 1960s, when interactive computing (meaning a programmer could enter commands and receive output from computers without submitting decks of punched cards to operators), computer graphics (an outgrowth of the air defense system), and Engelbart’s Augmentation Research Center were just getting off the ground. In the Vietnam War era, when Congress forced ARPA to crack down on research that wasn’t directly related to weaponry, Taylor recruited all the young talent he had previously funded for ARPA to join a new research laboratory that Xerox Corporation was starting in California. C. Peter McColough, the visionary Xerox CEO at that time, bankrolled a research center that would turn his company from a copier manufacturer to “the architect of information” for the office; infamously, the company wasn’t able to seize the advantage from the market it had invented before Apple and Microsoft stole its thunder.46

By 1984, when the Macintosh launched, Taylor was tired of hearing about Steve Jobs and Gates. Apple and Microsoft had created toys compared to the handcrafted workstations at PARC, and the expensive office versions Xerox was trying and failing to sell. Taylor wanted to talk about even more interesting people than the teenage millionaires in the news—people who weren’t featured in national magazines but who had made PCs possible, such as Engelbart. At Taylor’s suggestion, I read Engelbart’s 1962 paper “Augmenting Human Intellect,” and was electrified by it.47 In this paper, twenty years old by the time I read it, Engelbart detailed exactly how and why a computer could be used as a mind amplifier. More excitingly, Taylor told me that Engelbart had built his dream machine—Taylor had funded it when he was at ARPA—and was still actively developing his original vision. I made a pilgrimage to Engelbart’s Augmentation Research Center, which had been sold by Stanford Research Institute after ARPA monies dried up, to Tymshare, a company that no longer exists. Engelbart’s office was ironically in a building surrounded by the growing Apple campus. I drove down to interview him—an encounter that changed my life.
Engelbart couldn’t help trying to recruit others to assist him realizing the idea that came into his head in the 1950s as he drove to work in the fruit orchards that were to become Silicon Valley. Making it happen turned out to be more difficult than he had imagined. After a decade of trying to convince computer scientists and the computer industry that their technology could amplify human cognitive abilities, Engelbart wrote his paper because he realized that nobody even had a conceptual framework or mental model of computers that would enable them to see their potential. He certainly succeeded in convincing me of his vision, just as he had previously attracted engineers to build his first prototypes and had changed the way computer designers thought about what they were doing when he pulled off the famous “mother of all demos” in 1968: at an assembly gathering most of the computer designers in the world, he showed off the point-and-click hypermedia system his Augmentation Research Center had developed.48 I remember driving home from my first meeting with Engelbart, all fired up to write about someone who had offered an idea that was changing the world, and had done so out of a conviction that he had a duty to use his knowledge to facilitate ways for people to work together to solve the world’s ever more complex problems.

One aspect of Engelbart’s vision, though, hasn’t quite yet come to pass in the way that his first prototypes of graphical user interfaces, hypertext, multimedia, and online knowledge communities have developed into global media in his lifetime. In his original paper, Engelbart described a system of “humans using language, artifacts, methodology, and training.”49 I recall Engelbart remarking to me on several occasions recently that the artifacts’ development had far outstripped the cognitive and social aspects of an augmentation system as he saw it—the language, methodology, and training had not spread through the population the way home computers with mice, icons, and hyperlinked networks had caught on. The books I have written since I met Engelbart, culminating in this one, have attempted, in my own humble way, to help remedy that deficit.

Reading Kay, and meeting Taylor and Engelbart, led me to write a book about “the history and future of mind-amplifying technology,” as my Tools for Thought was subtitled. In the process of researching that book, I bought a twelve hundred bit-per-second modem (today’s broadband speeds are millions of times faster) for five hundred dollars in 1983, started exploring amateur computer BBSs, and joined the Whole Earth ’Lectronic Link (WELL) when it was a few months old, in summer 1985. Two years later, I wrote my article on virtual communities for Whole Earth Review that apparently put the term into the public vocabulary, as noted earlier.50
I started writing about my life online in part because the small subculture of enthusiasts for computer-mediated communication that existed in 1985 was certain that what we were doing would become important in the future, and in part to justify to my wife all the fun I was having hanging out online. I admit that I was and remain an enthusiast for social media of all kinds. I maintain and participate to this day in blogs, vlogs, wikis, social network services, and BBSs. My outlook, however, has grown more critical over the years. The online culture has changed. I’ve changed. And how I think about the significance of online socializing has changed. While still a devotee, I’m now aware and wary of the rat holes, hidden biases, unwholesome interchanges, and delusions of grandeur that can plague online culture. It is possible, I have long believed, to temper one’s ardor with critical thinking, and that it is not healthy to have to choose only between being a complete supporter and a total skeptic. I want the reader to keep in mind that the advice I’m giving about how to participate productively in digital culture grows out of my enthusiastic, if not uncritical, use of these media.

I admit that I’m immersed. I understand that this immersion works for me in my particular situation, sitting in my garden as I tap out these words under the plum tree, in ways that it doesn’t work for many others, and I believe that this rate of mediated communication should be regarded with a critical eye for multiple reasons. Yet compared to thirty years ago, in my typewriter and library stacks days, I guarantee you that as a thinker, writer, learner, and teacher, both my ability to know and communicate have been immensely empowered—from the self-correcting typewriter to the iPhone, from the local library to all the knowledge in the world floating in the air, from the card catalog to Google. Now, if I can only figure out how to stay off-line for a few weeks without having to deal with ten thousand messages, how to better detect texting drivers, or the best strategy for trying to teach thirty students while they surf the Web.

As laptop-carrying, smart-phone-using members of the digitally connected infosphere, we need to start by learning a new discipline: the literacy of attention. As citizens and cocreators of the cultures that shape us, we need participatory media skills. As collaborators in the collective intelligence that faces massive problems from global warming to water-sharing conflicts, we need to learn literacies of cooperation, mass collaboration, and collective action. As dwellers in the network society, we must understand and master the nature along with use of social networks, technical and human—and grasp the way both mediated and face-to-face social practices can increase or drain social capital. And in a world where nobody can trust the authority of any text they find online, the ability to quickly
evaluate the validity or bogosity of information is no longer an intellectual nicety. Critical thinking about media practices has become an essential, learnable mental skill.

My attention—the symbols, sounds, and images I personally experience—is the thread that weaves these dimensions into an integral whole. What use to me are fiber optics and network protocols without my attention as well as thought processes to make sense of all the bits flying around the networks? Attention connects the events that occur simultaneously in the mind, between people, and among technologies. Human thought processes are themselves no more than a part—a kind of focusing lens—of a system that includes neurons, symbols, search engines, social systems, and computational clouds.
You are already a digital humanist, whether or not you know it. Digital humanities has exploded in popularity over the last decade, as evidenced by the creation of many different types of grants to help digital humanities research (The Office of Digital Humanities at the National Endowment of the Humanities, the creation of digital
humanities specific grants at the American Council of Learned Societies, and the impressive growth of digital humanities-related panels at the Modern Language Association and American Historical Association annual meetings. Feeling the effects of this expansion, many institutions are starting to privilege the digital humanities as a strategic priority. Yours is probably no exception.

But while digital humanities may seem like an intimidating, exponentially growing field with varying ideas of “insiders” and “outsiders,” you and your students are all already digital humanists, because you all use technology in your daily lives. At its best, the digital humanities is about engaging more critically with the intersections between technology and how we act, think and learn. Without knowing it, you’re probably already using many of the techniques of digital humanists in your life and in your classroom.

What I offer below are some easy ways to dip your toe into the field. Implementing digital humanities into your curriculum may seem like a monumental task, especially for institutions that fall outside of the research one university category. The most visible digital humanities projects are often located within graduate programs at well-funded, research institutions. People at primarily undergraduate-focused institutions might wonder how this field can be applied to rejuvenating traditional humanities curricula. In addition, less well-funded institutions might not find it as easy to commit to providing the frameworks to build successful digital humanities projects, as these often require substantial resources such as digital infrastructure (computers, servers, software) and technical support (particularly for faculty, staff and students who are new to digital work).

To address this, in this article I give a brief overview of an assortment of digital humanities projects that can be implemented in primarily undergraduate-focused institutions. This has been important work to encourage for me personally because so much of traditional humanities work can be augmented by digital tools, and because getting students to critically engage in the theoretical foundations of these tools is a core humanities mission. In this essay, I deal mostly with the former, listing some examples of different levels of tools and expertise that can go into each type of project. Readers should be able to decide on what level they would like to start at, and build some possible ideas to “scaffold” the project, or stages of development and release for the project. At the end of the overview I offer an activity that can be easily applied by instructors interested in conducting digital humanities workshops at their institutions.
and an annotated list of additional resources. My goal is to provide an easy introduction for instructors to think through possibilities for incorporating the digital humanities within an undergraduate curriculum with either free or inexpensive digital tools.

**Mapping Projects**

Literature courses often encourage students to reflect on the role of space and place in a literary text. A common assignment might require students to draw maps of geographical places visited by characters in a text. Such an assignment can be greatly enhanced with digital humanities tools.

James Joyce's *Ulysses* is often studied in terms of space and place. While this is traditionally plotted out in pen and paper (see Vladimir Nabokov’s sketched-out map of the paths Stephen Dedalus and Leopold Bloom take in *Ulysses* on June 16, 1904), such projects lend themselves quite easily to digital adaptation.

**Nabokov on Ulysses**
Gerry Carlin and Mair Evan’s Google Maps annotations of *Ulysses* is a digital humanities equivalent of Nabokov’s hand-drawn map. Carlin and Evan’s project allows users to zoom into particular points of interest that relate to key locations in *Ulysses*.

**JAMES JOYCE’S ULYSSES ON GOOGLE MAPS**

Users can click on individual chapters of *Ulysses* via the left menu to retrieve useful notes ranging from a summary of chapter events, important symbols and parallels, to commentary by the project authors.

**NOTES BY CHAPTER**
These mapping projects are easily adapted for other texts. For example, I worked with Xiaojing Zhou's Asian American literature class at the University of the Pacific on identifying and annotating areas in Native Speaker by Chang Rae-Ee. Working together with the class, we created a collaborative Google Map which identified a significant geographical location in the novel, and added annotations and quotations on the map:

**ANNOTATING NATIVE SPEAKER AT THE UNIVERSITY OF THE PACIFIC**
Google maps also allows for a “street view” of specific locations, allowing students a glimpse of the location without having to physically visit.

**GETTING TO GOOGLE STREET VIEW**

**GOOGLE STREET VIEW**
Starting with Google Maps to integrate digital humanities in the classroom is relatively painless, easy and free. The tool is easy to navigate, and as many students are already familiar with the Google interface, this familiarity helps them to get to the meat of the assignment more quickly. Instructors interested in exploring mapping projects should thus probably start with this tool. While much more sophisticated projects involving GIS and visualization software are possible, they require considerably more investment in terms of course time and resources.

**TEXT ANALYSIS**

Another common digital humanities pedagogical approach is to use digital tools to conduct text analysis. These tools can range from very simple to incredibly complex. This section showcases three easy-to-use and free tools.

The easiest and free tool currently available is [Wordle](http://www.wordle.net), which allows anyone to quickly generate “word clouds” from text the user provides. Words that occur more frequently appear larger in the Wordle. Instructors can use this visualization to explore with students if this means certain themes might be more prolific in a text they are analyzing.

[Wordle Main Page](http://www.wordle.net)
To generate a Wordle, the user should paste some text, or the URL of a blog, feed or webpage that has an RSS feed into the query box.

**WORDLE GENERATOR**
For my example Wordle below, I pasted in the full text of *Othello* hosted by Shakespeare at MIT. Outside of the names of the characters, words that are selected include “Moor,” “heaven,” “love,” “bed,” “night,” all of which correspond to the theme of the threat of interracial sexuality dominant in the play.

**WORDLE OF OTHELLO**

Wordle is also helpful in analyzing student writing. Once student papers are uploaded, the resulting word cloud reveals words that may be repeated too often and which inhibit the clarity and focus of the writing.

[Voyant](https://www.voyant-tools.org/) and [Textal](https://textal.com/) are two additional text analysis tools that are free and easy to use. Voyant, produced by Stéfan Sinclair and Geoffrey Rockwell, is more robust than Wordle: it is more predictive and comparative.
Wordle, allowing users to upload texts from a variety of formats, use texts from different locations, and allows for complex analysis such as multi-word (n-gram) views and the searching of terms by proximity. Textal is a free iOS application by Melissa Terras and her team that allows users to analyze online texts such as tweet streams. In the Textal application, inputting a text source generates word clouds, and zooming in on particular words generates statistics such as the number of times the word appears in the text, how many words the document contains, and how often that word is used. The Textal application is very easy to use and powerful.

**Online Exhibitions**

Creating digital exhibitions might be an attractive project to some instructors. Many are used to getting students involved in creating physical exhibitions — the curation and presentation of materials being a useful pedagogical exercise in examining questions of cultural value. Furthermore, adding a digital component to a physical exhibition extends its reach and its audience. It also provides an easy way to get students involved with digital tools.

Online exhibits can be extremely customized and elaborate, such as in the *What Jane Saw* exhibit below, which allows viewers to experience a three-dimensional view of an art exhibition Jane Austen visited on May 24 1813:

**What Jane Saw**
They can also be much simpler. Omeka is a useful tool that allows instructors with limited coding experience to easily create online exhibitions with their students. The simplest Omeka instance is Omeka.net, which sets up faculty with predesigned templates. While Omeka.net is not as customizable as the original Omeka software, which needs to be installed on a server, it is a useful starting point for beginner faculty.

A good example of what can be done with Omeka is the Children & Youth in History project, which contains a showcase of different objects containing digital annotations related to global childhood.

**Children and Youth in History Using Omeka.**
Wikipedia Editing

Finally, an easy and valuable project to incorporate in the humanities classroom is Wikipedia editing. This project often appeals to students given how often they use Wikipedia as a reference source themselves. Additionally, learning how to navigate the rules and regulations that govern Wikipedia as a community is a valuable teaching opportunity to discuss the cultures of different environments.

For example, one of Wikipedia’s axioms is that it focuses on “verifiability, not truth.” Which means that everything on Wikipedia has to be backed up by compelling evidence (which is often either peer-reviewed articles or fact-checked popular media sources — what in fact most instructors demand that their own students use as evidence in their courses.) In this regard, Wikipedia editing trains students to think about what constitutes reliable information and what does not, which translates into their academic work.

Instructors who teach socially-inflected humanities courses might also be interested in contributing to various political Wikipedia projects. The online encyclopedia is well known, for example, for the gender gap in its editors — the typical Wikipedia editor is a thirty-year-old, middle-class, English-speaking college-educated male. Instructors interested in amending this gender gap through classroom instruction can find a wealth of resources on political Wikipedia editing on the Postcolonial Digital Humanities website. Many help guides are also available for instructors wishing to integrate Wikipedia into the classroom, ranging from a booklet on using Wikipedia as a teaching tool to sample case studies on Wikipedia in education.

Ideas for Your Own Digital Humanities Workshop

The project showcase I listed above is a useful starting point for people wishing to give their own “getting started in the digital humanities” workshop. Once the overview is complete, I suggest the following as a hands-on activity. I have tried this activity in a
number of institutions, and it has always generated widespread interest and enthusiasm for starting work in the digital humanities.

**Activity**

Give out 3×5 index cards to everyone in the room before you begin the workshop. After you finish your overview of projects, ask everyone in the room to write down three digital humanities projects they see value in pursuing (this can be adapted for both a faculty workshop and for a class project with students). Give everyone adequate time to write three ideas down. Setting a watch or a timer for 90 seconds is a good idea—it provides enough time for most people to get at least one idea down on paper.

Once the 90 seconds are over, ask your participants to sit next to someone they do not know and discuss which one of the six projects they have listed is the most important, and why. Let them have enough time to do this—a minimum of another 90 seconds is suggested. Then watch and listen as the quiet room begins to burst into noisy activity. This “think pair share” activity, which I borrowed from Cathy Davidson, is helpful precisely because by brainstorming on their own, each participant in the workshop envisions their own project (and in turn, their connection) to the digital humanities.

Finally, if you have adequate time and a small enough group (not more than 70 people), you can ask each group for their choice of project and for their rationale for it. The group can then make a pitch for their project. Once you create the entire list of projects (which can be shown on a projector), you can ask the room to vote on the project they would most like to pursue. When I gave this workshop at Cabrini College, we ended up with two fantastic projects that a group of students each started brainstorming and outlining on their own on whiteboards. The whiteboards were full of plans by the end of the session. Below is an image of one mapped-out project:

**Whiteboard from Cabrini College workshop**
**CONCLUSION**

This brief article has provided an overview of digital humanities projects that can be inexpensively and easily applied to the undergraduate classroom and suggested an activity to conclude an exploratory workshop for faculty and/or students. To end, I list below a brief annotated bibliography on additional helpful sources that can be used to elaborate on the workshop structure proposed by this essay and to get faculty and students interested in starting digital humanities work.

**FURTHER READING**


  Website with very useful presentation slides, lectures and other downloads on getting started with the digital humanities, creating your first digital humanities project, starting a digital humanities laboratory.


  In this post, Morgan lays out an extensive overview of different genres of digital humanities projects, possible tools for creating these projects and different instances of these projects from smaller to greater scales.

Posner gives an overview of seven genres of digital humanities projects, and the types of skills and tools interested people will need to embark on such projects.

- **Project Bamboo Dirt.** Web. 27 Jan. 2013.

An easy to navigate resource that is a repository of digital research tools for scholarly use. If you want a tool to accomplish something, there's a good chance that it's already been reviewed on Dirt.

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**ADD TO THE CONVERSATION**

**EXPLORE RELATED ARTICLES FROM HYBRID PEDAGOGY**
Pedagogy and the Logic of Platforms

In 1974, computers were oppressive devices in far-off air-conditioned places. Now you can be oppressed by computers in your own living room.


In his initial New Horizons column in *EDUCAUSE Review*, Mike Caulfield asked: "Can Higher Education Save the Web?") I was intrigued by this question since I often say to my students that the web is broken and that the ideal thing to do (although quite unrealistic) would be to tear it down and start from scratch.

I call the web "broken" because its primary architecture is based on what Harvard Business School Professor Shoshana Zuboff calls "surveillance capitalism," a "form of information capitalism [that] aims to predict and modify human behavior as a means to produce revenue and market control." Web2.0—the web of platforms, personalization, clickbait, and filter bubbles—is the only web most students know. That web exists by extracting individuals' data through persistent surveillance, data mining, tracking, and browser fingerprinting and then seeking new and "innovative" ways to monetize that data. As platforms and advertisers seek to perfect these strategies, colleges and universities rush to mimic those strategies in order to improve retention.

That said, I admit it might be useful to search for a more suitable term than
"broken." The web is not broken in this regard: a web based on surveillance, personalization, and monetization works perfectly well for particular constituencies, but it doesn't work quite as well for persons of color, lower-income students, and people who have been walled off from information or opportunities because of the ways they are categorized according to opaque algorithms.

My students and I frame the realities of the current web in the context of digital redlining, which provides the basis for understanding how and why the web works the way it does and for whom. The concept of digital redlining springs from an understanding of the historical policy of redlining: "The practice of denying or limiting financial services to certain neighborhoods based on racial or ethnic composition without regard to the residents' qualifications or creditworthiness. The term 'redlining' refers to the practice of using a red line on a map to delineate the area where financial institutions would not invest."

In the United States, redlining began informally but was institutionalized in the National Housing Act of 1934. At the behest of the Federal Home Loan Bank Board, the Home Owners Loan Corporation (HOLC) created maps for America's largest cities and color-coded the areas where loans would be differentially available. The difference among these areas was race.

Digital redlining is the modern equivalent of this historical form of societal division; it is the creation and maintenance of technological policies, practices, pedagogy, and investment decisions that enforce class boundaries and discriminate against specific groups. The *digital divide* is a noun; it is the consequence of many forces. In contrast, *digital redlining* is a verb, the "doing" of difference, a "doing" whose consequences reinforce existing class structures. In one era, redlining created differences in physical access to schools, libraries, and home ownership. In my classes, we work to recognize how digital redlining is integrated into technologies, and especially education technologies, and is producing similar kinds of discriminatory results.
We might think about digital redlining as the process by which different schools get differential journal access. If one of the problems of the web as we know it now is access to quality information, digital redlining is the process by which so much of that quality information is locked by paywalls that prevent students (and learners of all kinds) from accessing that information. We might think about digital redlining as the level of surveillance (in the form of analytics that predict grades or programs that suggest majors to students). We also might think about digital redlining to the degree that students who perform Google searches get certain information based on the type of machine they are using or get served ads for high-interest loans based on their digital profile (a practice Google now bans). It's essential to note that the personalized nature of the web often dictates what kind of information students get both inside and outside the classroom. A Data & Society Research Institute study makes this clear: "In an age of smartphones and social media, young people don't follow the news as much as it follows them. News consumption is often a byproduct of spending time on social media platforms. When it comes to getting news content, Facebook, Twitter, Instagram and native apps like the Apple news app are currently the most common places where the teens and young adults in our focus groups encounter news."6

Students are often surprised (and even angered) to learn the degree to which they are digitally redlined, surveilled, and profiled on the web and to find out that educational systems are looking to replicate many of those worst practices in the name of "efficiency," "engagement," or "improved outcomes." Students don't know any other web—or, for that matter, have any notion of a web that would be different from the one we have now. Many teachers have at least heard about a web that didn't spy on users, a web that was (theoretically at least) about connecting not through platforms but through interfaces where individuals had a significant amount of choice in saying how the web looked and what was shared. A big part of the teaching that I do is to tell students: "It's not supposed to be like this" or "It doesn't have to be like this." The web is fraught with recommender engines and analytics. Colleges and
universities buy information on prospective students, and institutions profile students through social media accounts. Prospective employers do the same. When students find out about microtargeting, social media "filter bubbles," surveillance capitalism, facial recognition, and black-box algorithms making decisions about their future—and learn that because so much targeting is based on economics and race, it will disproportionately affect them—their concept of what the web is changes.

Another aspect of my teaching is rethinking the notion of "consent." It's important to ask: What would the web look like if surveillance capitalism, information asymmetry, and digital redlining were not at the root of most of what students do online? We don't know the answer. But if higher education is to "save the web," we need to let students envision that something else is possible, and we need to enact those practices in classrooms. To do that, we need to understand "consent" to mean more than "click here if you agree to these terms."

I often wonder if it's possible to have this discussion without engaging in a deep and ahistorical practice of nostalgia. Telling students about the "good old days" of hand coding and dial-up internet access probably isn't the best way to spend classroom time. However, when we use the web now, when we use it with students, and when we ask students to engage online, we must always ask: What are we signing them up for? (Ultimately, we must get them to ask that question themselves and take it with them.) Here the term "consent," often overused and misunderstood, needs to be foregrounded in the idea that we must do all we can to explore the reality that students are entering into an asymmetrical relationship with platforms.

While we can do our best to inform students, the black box nature of the web means that we can never definitively say to them: "This is what you are going to be a part of." The fact that the web functions the way it does is illustrative of the tremendously powerful economic forces that structure it. Technology platforms (e.g., Facebook and Twitter) and education technologies (e.g., the
(learning management system) exist to capture and monetize data. Using higher education to "save the web" means leveraging the classroom to make visible the effects of surveillance capitalism. It means more clearly defining and empowering the notion of consent. Most of all, it means envisioning, with students, new ways to exist online.

Notes


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The Web We Need to Give Students

“Giving students their own digital domain is a radical act. It gives them the ability to work on the Web and with the Web.”

By Audrey Watters
Student privacy has become one of the hottest issues in education, with some 170 bills proposed so far this year that would regulate it. These legislative efforts stress the need to protect students when they’re online, safeguarding their data from advertisers as well as from unscrupulous people and companies. There’s some pushback against these proposals too, with arguments that restrictions on data might hinder research or the development of learning analytics or data-driven educational software.

But almost all arguments about student privacy, whether those calling for more restrictions or fewer, fail to give students themselves a voice, let alone some assistance in deciding what to share online. Students have little agency when it comes to education technology—much like they have little agency in education itself.

The Domain of One’s Own initiative at University of Mary Washington (UMW) is helping to recast the conversation about student data. Instead of focusing on protecting and restricting students’ Web presence, UMW helps them have more control over their scholarship, data, and digital identity.

The Domains initiative enables students to build the contemporary version of what Virginia Woolf in 1929 famously demanded in A Room of One’s Own—the necessity of a personal place to write. Today, UMW and a growing number of other schools believe that students need a proprietary online space in order to be intellectually productive.

As originally conceived at the Virginia liberal arts university, the Domains initiative provides students and faculty with their own Web domain. It isn’t simply a blog or a bit of Web space and storage at the school’s dot-edu, but their own domain—the dot com (or dot net, etc) of the student’s choosing. The school facilitates the purchase of the domain; it helps with installation of WordPress and other open source software; it offers both technical and
instructional support; and it hosts the site until graduation when domain ownership is transferred to the student.

And then—contrary to what happens at most schools, where a student’s work exists only inside a learning management system and cannot be accessed once the semester is over—the domain and all its content are the student’s to take with them. It is, after all, their education, their intellectual development, their work.

Intellectual productivity on the Web looks a bit different, no doubt, than it did at Woolf’s writing desk. But there remains this notion, deeply embedded in Domain of One’s Own, that it is important to have one’s own space in order to develop one’s ideas and one’s craft. It’s important that learners have control over their work—their content and their data. In a 2009 article that served as a philosophical grounding of sorts for the initiative, Gardner Campbell, then a professor at Baylor University, called for a “personal cyberinfrastructure” where students:

not only would acquire crucial technical skills for their digital lives but also would engage in work that provides richly teachable moments…. Fascinating and important innovations would emerge as students are able to shape their own cognition, learning, expression, and reflection in a digital age, in a digital
medium. Students would frame, curate, share, and direct their own ‘engagement streams’ throughout the learning environment.

In developing this “personal cyberinfrastructure” through the Domain of One’s Own initiative, UMW gives students agency and control; they are the subjects of their learning, not the objects of education technology software.

Having one’s own domain means that students have much more say over what they present to the world, in terms of their public profiles, professional portfolios, and digital identities. Students have control over the look and feel of their own sites, including what’s shared publicly. This means they have some say—although not complete—over their personal data, and in turn they begin to have an understanding of the technologies that underpin the Web, including how their work and their data circulate there.

At the simplest level, a Domain of One’s Own helps students build their own digital portfolio. They can be used in a classroom setting in order for students to demonstrate their learning. These portfolios can contain text, images, video and audio recordings, giving students opportunities to express themselves in a variety of ways beyond the traditional pen-and-paper test or essay. One student uses her domain to showcase her artwork. Another chronicled her semester abroad. A third student has built a living CV, highlighting her academic research as well as her work experience.

Since UMW launched Domain of One’s Own in 2013, other schools have picked up on the program’s relevance in today’s world—including Emory University, the University of Oklahoma, and Davidson College, as well as at several high schools. Domain of One’s Own has also spun out a startup of sorts, Reclaim Hosting, that provides low-cost Web hosting and helps educators offer their students their own domains.
Clarence Fisher introduced Domains last year to his high school students at the Joseph H. Kerr School in Snow Lake, Manitoba. “The kids came in to the class with what I would call fair and average teen tech skills,” he said. “Lots of iPods, iPads, and laptops. Lots of Facebook and Instagram. But none of them had a presence online they were in control of before this.”

This observation was echoed by Bryan Jackson, who has implemented Domains at Gleneagle Secondary School in Coquitlam, British Columbia. “I wanted them to see and be aware of all of the options and the control that they are giving up when services such as Facebook are their primary web presence,” he said. By contrast, he introduced his students to open source platforms like WordPress, teaching them about Web standards like HTML and CSS.

Often when schools talk to students about their presence on the Web, they do so in terms of digital citizenship: what students need to know in order to use technology “appropriately.” Schools routinely caution students about the things they post on social media, and the tenor of this conversation—particularly as translated by the media—is often tinged with fears that students will be seen “doing bad things” or “saying bad things” that will haunt them forever.

While some schools are turning to social media monitoring firms to keep an eye on students online, rarely do schools give students the opportunity to demonstrate the good work that they do publicly. Nor do schools give students the opportunity to decide what and when and how that public, online display should look like. It’s a drawback to our digital citizenship conversations—we’re concerned about what students do online but we fail to probe the “appropriateness” of the demands on data and content that (education) technology companies increasingly make on the students in turn.

It’s one of the flaws too with how privacy conversations about education technology are usually framed. Debates about what happens to student data—who it’s shared with, for example—seldom include students’ input. These debates do not recognize the ways in which students have already developed
rich social lives online and could use help, not punishment or paternalism, in understanding how to think through the data trails they're leaving behind.

There is an understandable learning curve to helping students manage their online presence via their own domain. “At first there was a fair amount of fumbling around, Googling solutions, and trying to understand their options,” said teacher Clarence Fisher. “Within a week, the kids were able to understand what their options were and how their site was affected by changes they made. As time went on, we talked a lot more about technical issues (backup, recovery, privacy options, hosting laws in different countries, etc). But we also talked a lot more about digital citizenship, safety, control, design, etc. The kids saw the site much more as their own and their responsibility.”

*The importance of giving students responsibility for their own domain cannot be overstated. This can be a way to track growth and demonstrate new learning over the course of a student’s school career—something that they themselves can reflect upon, not simply grades and assignments that are locked away in a proprietary system controlled by the school.*

And if a student owns their own domain, as she moves from grade to grade and from school to school, all that information—their learning portfolio—can travel with them.

Education technology—and more broadly, the culture of education—does a terrible job with this sort of portability and interoperability. When a student moves to a new school, for example, they often have to request their
transcript, a document that lists their courses and their grades. A transcript is by definition a copy of their education record. The transcript is often printed on a piece of paper with formal letterhead, perhaps with a watermark or stamp to show that it’s “official.” This lack of portability continues in much digital schoolwork too. Even if students are encouraged to create online portfolios or to use services like Google Apps for Education in order to store all their work, they don’t actually get to take that work with them when they move or graduate. (In the case of Google Apps, you can download your files. But then you’ll need to find a new place to store them.) Too often, students’ work in these systems gets deleted over the summer months as schools aren’t in the business of permanently storing student work. School district IT is not the right steward for student work: the student is.

Giving students their own digital domain is a radical act. It gives them the ability to work on the Web and with the Web, to have their scholarship be meaningful and accessible by others. It allows them to demonstrate their learning to others beyond the classroom walls. To own one’s domain gives students an understanding of how Web technologies work. It puts them in a much better position to control their work, their data, their identity online.

“I want to know where my ones and zeros are stored,” said Bryan Jackson, referring to the basic binary code in which computers ‘think.’ “And I want my students to know that that’s something they can ask about, and learn to manage for themselves.”

Illustrations by Lisk Feng

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The best online and hybrid courses are made from scraps strewn about and gathered together from across the web. We build a course by examining the bits, considering how they’re connected, and creating pathways for learners to make their own connections.

The design-process is what distinguishes online teaching most from traditional on-
The design-process is what distinguishes online teaching most from traditional on-ground teaching. When we teach an on-ground class, the room in which we teach has been built for us in advance. Usually, it's in a school, on a campus, has chairs, desks, tables, windows, walls, a door. Sometimes there's a computer, a projector, a screen. Hopefully, the desks and chairs are moveable and there are chalkboards on multiple walls. When we enter these rooms, we still make (or, rather, should make) intentional design decisions. How will the chairs be arranged? What direction will we face? Will the blinds be open or closed? Where will the teacher's desk be? Will the room have a front? Will we re-arrange from day to day or maintain a consistent configuration?

All of these decisions require careful contemplation and experimentation. Letting the default configuration of a classroom dictate how we'll teach is to allow the bureaucratic (and in this case architectural) trappings of schooling subsume our pedagogies. I've taught in many classrooms where the desks were arranged by default into rows, each student forced to stare into the back of another student's head. This is not a prime configuration to encourage active engagement, critical thinking, collaboration, interaction, making, doing, or discussing, all of which are (in varying degrees) essential for learning. I would say, though, that any arrangement is problematic if it's fixed permanently in advance. The learning space should be constructed intentionally from one activity to the next and preferably by or in consultation with students.

When we teach online, we have to build both the course and the classroom. A good learning management system is a tool that can help with this process; however, we should never let its design decisions — its architecture — dictate our pedagogies. We should also not blindly follow our institution's choice of learning management system. Certain tools work well for building certain kinds of learning experiences, but there's no universal solution. Teachers should be instrumental in making decisions about the technologies used in their classrooms (virtual or otherwise). And a single course should leverage several solutions and configurations, given the specific needs of the day, activity, or student.

Hybrid classes demand an even more complex architecture, requiring consideration of the physical space(s) we'll work within, the virtual space(s), as well as the various ways we'll move between the spaces. When we build a hybrid class, we must consider how we'll create pathways between the learning that happens in a room and the learning that happens on the web. A hybrid strategy can be as simple as a single but powerful hyperlink embedded in an e-mail or as complex as replacing the syllabus for a course with a multi-author WordPress installation.
In “Online Learning: a Manifesto,” I offer a series of tenets, which I describe as “points of departure to encourage a diversity of pedagogies.” Now, in this article, I want to drill down a little deeper into the nuts and bolts of online and hybrid course design, exploring more specific strategies for implementing several of the tenets from my earlier article:

“The best online learning should engage us in an immediate and physical way.”

For an online or hybrid course, I create activities that ask students to venture out into their communities. As often as possible in my courses, I use tools that play well with mobile devices, like Layar or WordPress, to allow us to do our work in the world and not just behind a desk. The best tools make themselves as invisible as possible, serving not as a distraction but as a way of extending the landscape beyond its bounds. So, I might ask students to blog about Thoreau’s Walden while on a hike, including pictures from their adventure. And if students tweet their post with geotagging activated, they contribute to a humongous archive of location-tagged tweets. By sharing and interacting with this kind of work online we bring each other into a shared sense of physical space. Rather than merely redistributing learning, a hybrid pedagogy asks us to reflect on and make connections between learning that happens in classrooms, online, at a desk, aboard a bus, on a mountaintop, by ourselves, and in conversation.

“The openness of the internet is its most radical and pedagogically viable feature.”

I’ve taught hybrid classes since 2001 and fully online classes since 2007. Almost every class I’ve taught has been an open course, but few have been massive. Designing for openness means giving careful thought to both what registered students can do inside a course and what passersby can do. I began by putting all of my syllabi online, but I’ve
increasingly asked students to do public work and to have online discussions in open fora. For me, openness means allowing access to all or a significant portion of a course without registration. Some of the best learning opportunities are ones we fall haphazardly into. A certain amount of immediacy is lost when we are forced to trade personal data for access — to pay for our entrance into a course with personal information (which is what makes most MOOCs decidedly not free).

I've built course sites from scratch, but I've also found WordPress and Canvas to be extremely robust tools for designing open courses. Both allow entirely open components but can require registration or password-access at various points to enable different levels of engagement. Unlike most other learning management systems, any page in Canvas or WordPress generates a unique hyperlink, creating multiple points of entry to a course. There are a number of LMS plugins for WordPress, although most put far too much emphasis on grading and assessment for my taste. Don't put the cart before the horse, so to speak, by choosing an LMS because it offers a convenient gradebook.

"Academic rigor shouldn't be built into a course like an impenetrable fortress for students to inhabit. Rigor has to be fostered through genuine engagement."

When I design an online course, I start by thinking about the nature of the learning community I hope to foster. Most learning management systems offer tools for engagement, but they are usually closed asynchronous forums, which can be valuable, but only for a very specific kind of interaction. One of the drawbacks of these systems is that students usually don't retain access to their work once the course is over. Using tools like Twitter or Disqus for online discussion gives students more direct control over their own data, allowing them to delete, archive, and (in some cases) edit their contributions at will.

I'm of the mind that we can't make our courses “academically rigorous” by design, especially at the level of content or assessment. Rather, rigor arises through the development of a critically voracious learning community. This can't be compulsory, but has to be encouraged through intrinsic rather than extrinsic motivation. In other
words, making participation worth points does not help build community. (Handing out a grade to every person talking at a party would not encourage them to talk to us. In fact, probably just the opposite.) Rather, build or leverage a space that encourages open contribution and trust learners to navigate the space. The single best tip I have on this front is to avoid the ping-pong ball effect, in which the teacher responds to every (or nearly every) comment made by students with immediate correction or affirmation. This very quickly reinforces a hierarchy in which students are constantly looking to the teacher for approval. **Ignore any “best practices” or “quality assurance” measures that encourage the teacher’s voice to dominate online discussion.** Model thoughtful engagement and responsiveness with several well-placed comments/questions and leave space for the learners to follow suit.

> “Don’t wield outcomes like a weapon. Online learning activities should not be overly designed or too-strictly standardized.”

Courses should be designed by individuals or small groups of collaborators not by committees. We should also not use systems that etch curricula into stone. This means supporting (financially and culturally) course development and frequent course redevelopment. It also means eschewing altogether stock courses. Where possible, students should guide the curriculum and create course content. This means using or enabling tools that give students at least some measure of control over design. With a small group of students, this might mean building the course site together in a wiki or multi-author WordPress installation. With a larger group of students, where administering permissions for each student might become cumbersome, embedding Google docs or allowing comments on course pages can foster and facilitate student collaboration.

> “There is no one-size-fits-all approach to online education. Learning is not neatly divisible into discrete chunks (like courses).”
Online and hybrid course design should be motivated not by cost savings but by the pedagogical benefits of learning that happens and persists beyond the classroom. Online and hybrid models should not replace classroom instruction. We should design courses that actively reconsider when and where learning happens. One of the benefits of online learning, for me, is that I can have a local group of students collaborating with people elsewhere in the world, disturbing the notion that learning happens best in a single course, at a single institution, or within a single country. Social media allows us to bring together teachers and students working in similar courses around the world to create collaborative “textbooks” using curation tools like Pinterest, ScoopIt, Reddit, or Delicious. There are ways to make learning massive and accessible that don't involve stuffing 100,000 people into a closed-room MOOC.

“Content-expertise does not equal good teaching. The internet already has lots of experts in all manner of things. A good pedagogue, rather, relies on a variable mixture of content-expertise and careful thinking about teaching practices.”

We won't figure out online and hybrid learning — in higher education, at least — until we truly value faculty development and pedagogical training. The minimal top-down efforts I've seen toward this end have been largely ineffective. We need to start at the grassroots level to weave pedagogical work into our research and publishing. If teaching is indeed 40-80% of our jobs (depending on the type of institution), then the sessions at our disciplinary conferences should be 40-80% about teaching (or at least make explicit connections between our research and teaching). **Pedagogy is not the domain of Schools of Education and should be a respected specialty or sub-field in every discipline.** And departments developing online and hybrid courses need to start by hiring full-time or tenure-track faculty who specialize in online learning and/or digital pedagogy.

Most importantly, educators at every level must begin by listening to and trusting students. This means building space in every course for students to reflect upon the course’s pedagogy — an ongoing meta-level discussion of learning with student voices at its center. Teachers stand to learn more from students about online learning than we
could ever teach. Many students come to an online or hybrid class knowing very well how to learn online. It’s often our failure to know as well how to learn online that leads to many of the design mistakes in this generation of online courses. Recognizing this demands a culture-shift — demands that we acknowledge the diverse expertise of students as tantamount to our own.

**About the Author**

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Ranking, evaluating, and liking: Sorting out three forms of judgment

Elbow, Peter
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This essay is my attempt to sort out different acts we call assessment—some different ways in which we express or frame our judgments of value. I have been working on this tangle not just because it is interesting and important in itself but because assessment tends so much to drive and control teaching. Much of what we do in the classroom is determined by the assessment structures we work under.

Assessment is a large and technical area and I'm not a professional. But my main premise or subtext in this essay is that we nonprofessionals can and should work on it because professionals have not reached definitive conclusions about the problem of how to assess writing (or anything else, I'd say). Also, decisions about assessment are often made by people even less professional than we, namely legislators. Pat Belanoff and I realized that the field of assessment was open when we saw the harmful effects of a writing proficiency exam at Stony Brook and worked out a collaborative portfolio assessment system in its place (Belandoff and Elbow; Elbow and Belanoff). Professionals keep changing their minds about large-scale testing and assessment. And as for classroom grading, psychometricians provide little support or defense of it.

The Problems with Ranking and the Benefits of Evaluating

By ranking I mean the act of summing up one's judgment of a performance or person into a single, holistic number or score. We rank every time we give a grade or holistic score. Ranking implies a single scale or continuum or dimension along which all performances are hung.

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By evaluating I mean the act of expressing one’s judgment of a performance or person by pointing out the strengths and weaknesses of different features or dimensions. We evaluate every time we write a comment on a paper or have an conversation about its value. Evaluation implies the recognition of different criteria or dimensions—and by implication different contexts and audiences for the same performance. Evaluation requires going beyond a first response that may be nothing but a kind of ranking (“I like it” or “This is better than that”), and instead looking carefully enough at the performance or person to make distinctions between parts or features or criteria.

It’s obvious, thus, that I am troubled by ranking. But I will resist any temptation to argue that we can get rid of all ranking—or even should. Instead I will try to show how we can have less ranking and more evaluation in its place.

I see three distinct problems with ranking: it is inaccurate or unreliable; it gives no substantive feedback; and it is harmful to the atmosphere for teaching and learning.

(1) First the unreliability. To rank reliably means to give a fair number, to find the single quantitative score that readers will agree on. But readers don’t agree.

This is not news—this unavailability of agreement. We have long seen it on many fronts. For example, research in evaluation has shown many times that if we give a paper to a set of readers, those readers tend to give it the full range of grades (Diederich). I’ve recently come across new research to this effect—new to me because it was published in 1912. The investigators carefully showed how high school English teachers gave different grades to the same paper. In response to criticism that this was a local problem in English, they went on the next year to discover an even greater variation among grades given by high school geometry teachers and history teachers to papers in their subjects. (See the summary of Daniel Starch and Edward Elliott’s 1913 School Review articles in Kirschenbaum, Simon, and Napier 258–59.)

We know the same thing from literary criticism and theory. If the best critics can’t agree about what a text means, how can we be surprised that they disagree even more about the quality or value of texts? And we know that nothing in literary or philosophical theory gives us any agreed-upon rules for settling such disputes.

Students have shown us the same inconsistency with their own controlled experiments of handing the same paper to different teachers and getting different grades. This helps explain why we hate it so when students ask us their favorite question, “What do you want for an A?”: it rubs our noses in the unreliability of our grades.

Of course champions of holistic scoring argue that they get can get agreement among readers—and they often do (White). But they get that agreement by “training” the readers before and during the scoring sessions. What “training”
means is getting those scorers to stop reading the way they normally read—getting them to stop using the conflicting criteria and standards they normally use outside the scoring sessions. (In an impressive and powerful book, Barbara Herrnstein Smith argues that whenever we have widespread inter-reader reliability, we have reason to suspect that difference has been suppressed and homogeneity imposed—almost always at the expense of certain groups.) In short, the reliability in holistic scoring is not a measure of how texts are valued by real readers in natural settings, but only of how they are valued in artificial settings with imposed agreements.

Defenders of holistic scoring might reply (as one anonymous reviewer did), that holistic scores are not perfect or absolutely objective readings but just “judgments that most readers will agree are the appropriate ones given the purpose of the assessment and the system of communication.” But I have been in and even conducted enough holistic scoring sessions to know that even that degree of agreement doesn’t occur unless “purpose” and “appropriateness” are defined to mean acceptance of the single set of standards imposed on that session. We know too much about the differences among readers and the highly variable nature of the reading process. Supposing we get readings only from academics, or only from people in English, or only from respected critics, or only from respected writing programs, or only from feminists, or only from sound readers of my tribe (white, male, middle-class, full professors between the ages of fifty and sixty). We still don’t get agreement. We can sometimes get agreement among readers from some subset, a particular community that has developed a strong set of common values, perhaps one English department or one writing program. But what is the value of such a rare agreement? It tells us nothing about how readers from other English departments or writing programs will judge—much less how readers from other domains will judge.

(From the opposite ideological direction, some skeptics might object to my skeptical train of thought: “So what else is new?” they might reply. “Of course my grades are biased, ‘interested’ or ‘situated’—always partial to my interests or the values of my community or culture. There’s no other possibility.” But how can people consent to give grades if they feel that way? A single teacher’s grade for a student is liable to have substantial consequences—for example on eligibility for a scholarship or a job or entrance into professional school. In grading, surely we must not take anything less than genuine fairness as our goal.)

It won’t be long before we see these issues argued in a court of law, when a student who has been disqualified from playing on a team or rejected from a professional school sues, charging that the basis for his plight—teacher grades—is not reliable. I wonder if lawyers will be able to make our grades stick.

(2) Ranking or grading is woefully uncommunicative. Grades and holistic scores are nothing but points on a continuum from “yea” to “boo”—with no
information or clues about the criteria behind these noises. They are 100 percent evaluation and 0 percent description or information. They quantify the degree of approval or disapproval in readers but tell nothing at all about what the readers actually approve or disapprove of. They say nothing that couldn't be said with gold stars or black marks or smiley-faces. Of course our first reactions are often nothing but global holistic feelings of approval or disapproval, but we need a system for communicating our judgments that nudges us to move beyond these holistic feelings and to articulate the basis of our feeling—a process that often leads us to change our feeling. (Holistic scoring sessions sometimes use rubrics that explain the criteria—though these are rarely passed along to students—and even in these situations, the rubrics fail to fit many papers.) As C. S. Lewis says, “People are obviously far more anxious to express their approval and disapproval of things than to describe them” (7).

(3) Ranking leads students to get so hung up on these oversimplified quantitative verdicts that they care more about scores than about learning—more about the grade we put on the paper than about the comment we have written on it. Have you noticed how grading often forces us to write comments to justify our grades—and how these are often not the comment we would make if we were just trying to help the student write better? (“Just try writing several favorable comments on a paper and then giving it a grade of D” [Diederich 21].)

Grades and holistic scores give too much encouragement to those students who score high—making them too apt to think they are already fine—and too little encouragement to those students who do badly. Unsuccessful students often come to doubt their intelligence. But oddly enough, many “A” students also end up doubting their true ability and feeling like frauds—because they have sold out on their own judgment and simply given teachers whatever yields an A. They have too often been rewarded for what they don’t really believe in. (Notice that there’s more cheating by students who get high grades than by those who get low ones. There would be less incentive to cheat if there were no ranking.) We might be tempted to put up with the inaccuracy or unfairness of grades if they gave good diagnostic feedback or helped the learning climate; or we might put up with the damage they do to the learning climate if they gave a fair or reliable measure of how skilled or knowledgeable students are. But since they fail dismally on both counts, we are faced with the striking question of why grading has persisted so long.

There must be many reasons. It is obviously easier and quicker to express a global feeling with a single number than to figure out what the strengths and weaknesses are and what one’s criteria are. (Though I’m heartened to discover, as I pursue this issue, how troubled teachers are by grading and how difficult they find it.) But perhaps more important, we see around us a deep hunger to rank—to create pecking orders: to see who we can look down on and who we must look up.
to, or in the military metaphor, who we can kick and who we must salute. Psychologists tell us that this taste for pecking orders or ranking is associated with the authoritarian personality. We see this hunger graphically in the case of IQ scores. It is plain that IQ scoring does not represent a commitment to looking carefully at people's intelligence; when we do that, we see different and frequently uncorrelated kinds or dimensions of intelligence (Gardner). The persistent use of IQ scores represents the hunger to have a number so that everyone can have a rank. ("Ten!" mutter the guys when they see a pretty woman.)

Because ranking or grading has caused so much discomfort to so many students and teachers, I think we see a lot of confusion about the process. It is hard to think clearly about something that has given so many of us such anxiety and distress. The most notable confusion I notice is the tendency to think that if we renounce ranking or grading, we are renouncing the very possibility of judgment and discrimination—that we are embracing the idea that there is no way to distinguish or talk about the difference between what works well and what works badly.

So the most important point, then, is that I am not arguing against judgment or evaluation. I'm just arguing against that crude, oversimple way of representing judgment—distorting it, really—into a single number, which means ranking people and performances along a single continuum.

In fact I am arguing for evaluation. Evaluation means looking hard and thoughtfully at a piece of writing in order to make distinctions as to the quality of different features or dimensions. For example, the process of evaluation permits us to make the following kinds of statements about a piece of writing:

- The thinking and ideas seem interesting and creative.
- The overall structure or sequence seems confusing.
- The writing is perfectly clear at the level of individual sentences and even paragraphs.
- There is an odd, angry tone of voice that seems unrelated or inappropriate to what the writer is saying.
- Yet this same voice is strong and memorable and makes one listen even if one is irritated.
- There are a fair number of mistakes in grammar or spelling: more than "a sprinkling" but less than "riddled with."

To rank, on the other hand, is to be forced to translate those discriminations into a single number. What grade or holistic score do these judgments add up to? It's likely, by the way, that more readers would agree with those separate, "analytic" statements than would agree on a holistic score.

I've conducted many assessment sessions where we were not trying to impose a set of standards but rather to find out how experienced teachers read and evaluate, and I've had many opportunities to see that good readers give grades or
scores right down through the range of possibilities. Of course good readers sometimes agree—especially on papers that are strikingly good or bad or conventional, but I think I see difference more frequently than agreement when readers really speak up.

The process of evaluation, because it invites us to articulate our criteria and to make distinctions among parts or features or dimensions of a performance, thereby invites us further to acknowledge the main fact about evaluation: that different readers have different priorities, values, and standards.

The conclusion I am drawing, then, in this first train of thought is that we should do less ranking and more evaluation. Instead of using grades or holistic scores—single number verdicts that try to sum up complex performances along only one scale—we should give some kind of written or spoken evaluation that discriminates among criteria and dimensions of the writing—and if possible that takes account of the complex context for writing: who the writer is, what the writer's audience and goals are, who we are as readers and how we read, and how we might differ in our reading from other readers the writer might be addressing.

But how can we put this principle into practice? The pressure for ranking seems implacable. Evaluation takes more time, effort, and money. It seems as though we couldn't get along without scores on writing exams. Most teachers are obliged to give grades at the end of each course. And many students—given that they have become conditioned or even addicted to ranking over the years and must continue to inhabit a ranking culture in most of their courses—will object if we don't put grades on papers. Some students, in the absence of that crude gold star or black mark, may not try hard enough (though how hard is "enough")—and is it really our job to stimulate motivation artificially with grades—and is grading the best source of motivation?).

It is important to note that there are certain schools and colleges that do not use single-number grades or scores, and they function successfully. I taught for nine years at Evergreen State College, which uses only written evaluations. This system works fine, even down to getting students accepted into high quality graduate and professional schools.

Nevertheless we have an intractable dilemma: that grading is unfair and counterproductive but that students and institutions tend to want grades. In the face of this dilemma there is a need for creativity and pragmatism. Here are some ways in which I and others use less ranking and more evaluation in teaching—and they suggest some adjustments in how we score large-scale assessments. What follows is an assortment of experimental compromises—sometimes crude, seldom ideal or utopian—but they help.

(a) Portfolios. Just because conventional institutions oblige us to turn in a single quantitative course grade at the end of every marking period, it doesn't
follow that we need to grade individual papers. Course grades are more trustworthy and less damaging because they are based on so many performances over so many weeks. By avoiding frequent ranking or grading, we make it somewhat less likely for students to become addicted to oversimplified numerical evaluations—to think that evaluation always translates into a simple number—in short, to mistake ranking for evaluation. (I'm not trying to defend conventional course grades since they are still uncommunicative and they still feed the hunger for ranking.) Portfolios permit me to refrain from grading individual papers and limit myself to writerly evaluative comments—and help students see this as a positive rather than a negative thing, a chance to be graded on a body of their best work that can be judged more fairly. Portfolios have many other advantages as well. They are particularly valuable as occasions for asking students to write extensive and thoughtful explorations of their own strengths and weaknesses.

A midsemester portfolio is usually an informal affair, but it is a good occasion for giving anxious students a ballpark estimate of how well they are doing in the course so far. I find it helpful to tell students that I'm perfectly willing to tell them my best estimate of their course grade—but only if they come to me in conference and only during the second half of the semester. This serves somewhat to quiet their anxiety while they go through seven weeks of drying out from grades. By midsemester, most of them have come to enjoy not getting those numbers and thus being able to think better about more writerly comments from me and their classmates.

Portfolios are now used extensively and productively in larger assessments, and there is constant experimentation with new applications (Belanoff and Dickson; Portfolio Assessment Newsletter; Portfolio News).

(b) Another useful option is to make a strategic retreat from a wholly negative position. That is, I sometimes do a bit of ranking even on individual papers, using two "bottom-line" grades: H and U for "Honors" and "Unsatisfactory." I tell students that these translate to about A or A- and D or F. This practice may seem theoretically inconsistent with all the arguments I've just made, but (at the moment, anyway) I justify it for the following reasons.

First, I sympathize with a part of the students' anxiety about not getting grades: their fear that they might be failing and not know about it—or doing an excellent job and not get any recognition. Second, I'm not giving many grades; only a small proportion of papers get these H's or U's. The system creates a "non-bottom-line" or "non-quantified" atmosphere. Third, these holistic judgments about best and worst do not seem as arbitrary and questionable as most grades. There is usually a bit more agreement among readers about the best and worst papers. What seems most dubious is the process of trying to rank that whole middle range of papers—papers that have a mixture of better and worse
qualities so that the numerical grade depends enormously on a reader's priorities or mood or temperament. My willingness to give these few grades goes a long way toward helping my students forgo most bottom-line grading.

I'm not trying to pretend that these minimal "grades" are truly reliable. But they represent a very small amount of ranking. Yes, someone could insist that I'm really ranking every single paper (and indeed if it seemed politically necessary, I could put an OK or S [for satisfactory] on all those middle range papers and brag, "Yes, I grade everything.") But the fact is that I am doing much less sorting since I don't have to sort them into five or even twelve piles. Thus there is a huge reduction in the total amount of unreliability I produce.

(If it might seem that if I use only these few minimal grades I have no good way for figuring out a final grade for the course—since that requires a more fine-grained set of ranks. But I don't find that to be the case. For I also give these same minimal grades to the many other important parts of my course such as attendance, meeting deadlines, peer responding, and journal writing. If I want a mathematically computed grade on a scale of six or A through E, I can easily compute it when I have such a large number of grades to work from—even though they are only along a three-point scale.)

This same practice of crude or minimal ranking is a big help on larger assessments outside classrooms, and needs to be applied to the process of assessment in general. There are two important principles to emphasize. On the one hand we must be prudent or accommodating enough to admit that despite all the arguments against ranking, there are situations when we need that bottom-line verdict along one scale: which student has not done satisfactory work and should be denied credit for the course? which student gets the scholarship? which candidate to hire or fire? We often operate with scarce resources. But on the other hand we must be bold enough to insist that we do far more ranking than is really needed. We can get along not only with fewer occasions for assessment but also with fewer gradations in scoring. If we decide what the real bottom-line is on a given occasion—perhaps just "failing" or perhaps "honors" too—then the reading of papers or portfolios is enormously quick and cheap. It leaves time and money for evaluation—perhaps for analytic scoring or some comment.

At Stony Brook we worked out a portfolio system where multiple readers had only to make a binary decision: acceptable or not. Then individual teachers could decide the actual course grade and give comments for their own students—so long as those students passed in the eyes of an independent rater (Elbow and Belanoff; Belanoff and Elbow). The best way to begin to wean our society from its addiction to ranking may be to permit a tiny bit of it (which also means less unreliability)—rather than trying to go "cold turkey."

(c) Sometimes I use an analytic grid for evaluating and commenting on student papers. An example is given in Figure 1.
I often vary the criteria in my grid (e.g. "connecting with readers" or "investment") depending on the assignment or the point in the semester.

Grids are a way I can satisfy the students' hunger for ranking but still not give in to conventional grades on individual papers. Sometimes I provide nothing but a grid (especially on final drafts), and this is a very quick way to provide a response. Or on midprocess drafts I sometimes use a grid in addition to a comment: a more readerly comment that often doesn't so much tell them what's wrong or right or how to improve things but rather tries to give them an account of what is happening to me as I read their words. I think this kind of comment is really the most useful thing of all for students, but it frustrates some students for a while. The grid can help these students feel less anxious and thus pay better attention to my comment.

I find grids extremely helpful at the end of the semester for telling students their strengths and weaknesses in the course—or what they've done well and not so well. Besides categories like the ones above, I use categories like these: "skill in giving feedback to others," "ability to meet deadlines," "effort," and "improvement." This practice makes my final grade much more communicative.

(d) I also help make up for the absence of ranking—gold stars and black marks—by having students share their writing with each other a great deal both orally and through frequent publication in class magazines. Also, where possible, I try to get students to give or send writing to audiences outside the class. At the University of Massachusetts at Amherst, freshmen pay a ten dollar lab fee for the writing course, and every teacher publishes four or five class magazines of final drafts a semester. The effects are striking. Sharing, peer feedback, and publication give the best reward and motivation for writing, namely, getting your words out to many readers.

(e) I sometimes use a kind of modified contract grading. That is, at the start of the course I pass out a long list of all the things that I most want students to do—the concrete activities that I think most lead to learning—and I promise

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<tr>
<th>Strong</th>
<th>OK</th>
<th>Weak</th>
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<tr>
<td>CONTENT, INSIGHTS, THINKING, GRAPPLING WITH TOPIC</td>
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<tr>
<td>GENUINE REVISION, SUBSTANTIVE CHANGES, NOT JUST EDITING</td>
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<td>ORGANIZATION, STRUCTURE, GUIDING THE READER</td>
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<td>LANGUAGE: SYNTAX, SENTENCES, WORDING, VOICE</td>
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<td>MECHANICS: SPELLING, GRAMMAR, PUNCTUATION, PROOFREADING</td>
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<td>OVERALL [Note: this is not a sum of the other scores.]</td>
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Figure 1.
students that if they do them all they are guaranteed a certain final grade. Currently, I say it's a B—it could be lower or higher. My list includes these items: not missing more than a week's worth of classes; not having more than one late major assignment; substantive revising on all major revisions; good copy editing on all final revisions; good effort on peer feedback work; keeping up the journal; and substantial effort and investment on each draft.

I like the way this system changes the "bottom-line" for a course: the intersection where my authority crosses their self-interest. I can tell them, "You have to work very hard in this course, but you can stop worrying about grades." The crux is no longer that commodity I've always hated and never trusted: a numerical ranking of the quality of their writing along a single continuum. Instead the crux becomes what I care about most: the concrete behaviors that I most want students to engage in because they produce more learning and help me teach better. Admittedly, effort and investment are not concrete observable behaviors, but they are no harder to judge than overall quality of writing. And since I care about effort and investment, I don't mind the few arguments I get into about them; they seem fruitful. ("Let's try and figure out why it looked to me as though you didn't put any effort in here.") In contrast, I hate discussions about grades on a paper and find such arguments fruitless. Besides, I'm not making fine distinctions about effort and investment—just letting a bell go off when they fall palpably low.

It's crucial to note that I am not fighting evaluation with this system. I am just fighting ranking or grading. I still write evaluative comments and often use an evaluative grid to tell my students what I see as strengths and weaknesses in their papers. My goal is not to get rid of evaluation but in fact to emphasize it, enhance it. I'm trying to get students to listen better to my evaluations—by uncoupling them from a grade. In effect, I'm doing this because I'm so fed up with students following or obeying my evaluations too blindly—making whatever changes my comments suggest but doing it for the sake of a grade; not really taking the time to make up their own minds about whether they think my judgments or suggestions really make sense to them. The worst part of grades is that they make students obey us without carefully thinking about the merits of what we say. I love the situation this system so often puts students in: I make a criticism or suggestion about their paper, but it doesn't matter to their grade whether they go along with me or not (so long as they genuinely revise in some fashion). They have to think; to decide.

Admittedly this system is crude and impure. Some of the really skilled students who are used to getting As and desperate to get one in this course remain unhelpfully hung up about getting those H's on their papers. But a good number of these students discover that they can't get them, and they soon settle down to accepting a B and having less anxiety and more of a learning voyage.
THE LIMITATIONS OF EVALUATION AND THE BENEFITS OF EVALUATION-FREE ZONES

Everything I've said so far has been in praise of evaluation as a substitute for ranking. But I need to turn a corner here and speak about the limits or problems of evaluation. Evaluating may be better than ranking, but it still carries some of the same problems. That is, even though I've praised evaluation for inviting us to acknowledge that readers and contexts are different, nevertheless the very word evaluation tends to imply fairness or reliability or getting beyond personal or subjective preferences. Also, of course, evaluation takes a lot more time and work. To rank you just have to put down a number; holistic scoring of exams is cheaper than analytic scoring.

Most important of all, evaluation harms the climate for learning and teaching—or rather too much evaluation has this effect. That is, if we evaluate everything students write, they tend to remain tangled up in the assumption that their whole job in school is to give teachers “what they want.” Constant evaluation makes students worry more about psyching out the teacher than about what they are really learning. Students fall into a kind of defensive or on-guard stance toward the teacher: a desire to hide what they don’t understand and try to impress. This stance gets in the way of learning. (Think of the patient trying to hide symptoms from the doctor.) Most of all, constant evaluation by someone in authority makes students reluctant to take the risks that are needed for good learning—to try out hunches and trust their own judgment. Face it: if our goal is to get students to exercise their own judgment, that means exercising an immature and undeveloped judgment and making choices that are obviously wrong to us.

We see around us a widespread hunger to be evaluated that is often just as strong as the hunger to rank. Countless conditions make many of us walk around in the world wanting to ask others (especially those in authority), “How am I doing, did I do OK?” I don’t think the hunger to be evaluated is as harmful as the hunger to rank, but it can get in the way of learning. For I find that the greatest and most powerful breakthroughs in learning occur when I can get myself and others to put aside this nagging, self-doubting question (“How am I doing? How am I doing?”)—and instead to take some chances, trust our instincts or hungers. When everything is evaluated, everything counts. Often the most powerful arena for deep learning is a kind of “time out” zone from the pressures of normal evaluated reality: make-believe, play, dreams—in effect, the Shakespearian forest.

In my attempts to get away from too much evaluation (not from all evaluation, just from too much of it), I have drifted into a set of teaching practices which now feel to me like the best part of my teaching. I realize now what I’ve been unconsciously doing for a number of years: creating “evaluation-free zones.”

(a) The paradigm evaluation-free zone is the ten minute, nonstop freewrite. When I get students to freewrite, I am using my authority to create
conditions in order to contradict or interrupt our pervasive habit of always evaluating our writing. What is essential here are the two central features of freewriting: that it be private (thus I don’t collect it or have students share it with anyone else); and that it be nonstop (thus there isn’t time for planning, and control is usually diminished). Students quickly catch on and enter into the spirit. At the end of the course, they often tell me that freewriting is the most useful thing I’ve taught them (see Belanoff, Elbow, and Fontaine).

(b) A larger evaluation-free zone is the single unevaluated assignment—what people sometimes call the “quickwrite” or sketch. This is a piece of writing that I ask students to do—either in class or for homework—without any or much revising. It is meant to be low stakes writing. There is a bit of pressure, nevertheless, since I usually ask them to share it with others and I usually collect it and read it. But I don’t write any comments at all—except perhaps to put straight lines along some passages I like or to write a phrase of appreciation at the end. And I ask students to refrain from giving evaluative feedback to each other—and instead just to say “thank you” or mention a couple of phrases or ideas that stick in mind. (However, this writing—without-feedback can be a good occasion for students to discuss the topic they have written about—and thus serve as an excellent kick-off for discussions of what I am teaching.)

(c) These experiments have led me to my next and largest evaluation-free zone—what I sometimes call a “jump start” for my whole course. For the last few semesters I’ve been devoting the first three weeks entirely to the two evaluation-free activities I’ve just described: freewriting (and also more leisurely private writing in a journal) and quickwrites or sketches. Since the stakes are low and I’m not asking for much revising, I ask for much more writing homework per week than usual. And every day we write in class: various exercises or games. The emphasis is on getting rolling, getting fluent, taking risks. And every day all students read out loud something they’ve written—sometimes a short passage even to the whole class. So despite the absence of feedback, it is a very audience-filled and sociable three weeks.

At first I only dared do this for two weeks, but when I discovered how fast the writing improves, how good it is for building community, and what a pleasure this period is for me, I went to three weeks. I’m curious to try an experiment with teaching a whole course this way. I wonder, that is, whether all that evaluation we work so hard to give really does any more good than the constant writing and sharing (Zak).

I need to pause here to address an obvious rejoinder: “But withholding evaluation is not normal!” Indeed, it is not normal—certainly not normal in school. We normally tend to emphasize evaluations—even bottom-line ranking kinds of evaluations. But I resist the argument that if it’s not normal we shouldn’t do it.
The best argument for evaluation-free zones is from experience. If you try them, I suspect you'll discover that they are satisfying and bring out good writing. Students have a better time writing these unevaluated pieces; they enjoy hearing and appreciating these pieces when they don't have to evaluate. And I have a much better time when I engage in this astonishing activity: reading student work when I don't have to evaluate and respond. And yet the writing improves. I see students investing and risking more, writing more fluently, and using livelier, more interesting voices. This writing gives me and them a higher standard of clarity and voice for when we move on to more careful and revised writing tasks that involve more intellectual pushing—tasks that sometimes make their writing go tangled or sodden.

**The Benefits and Feasibility of Liking**

Liking and disliking seem like unpromising topics in an exploration of assessment. They seem to represent the worst kind of subjectivity, the merest accident of personal taste. But I've recently come to think that the phenomenon of liking is perhaps the most important evaluative response for writers and teachers to think about. In effect, I'm turning another corner in my argument. In the first section I argued against ranking—with evaluating being the solution. Next I argued not against evaluating—but for no-evaluation zones in addition to evaluating. Now I will argue neither against evaluating nor against no-evaluation zones, but for something very different in addition, or perhaps underneath, as a foundation: liking.

Let me start with the germ story. I was in a workshop and we were going around the circle with everyone telling a piece of good news about their writing in the last six months. It got to Wendy Bishop, a good poet (who has also written two good books about the teaching of writing), and she said, "In the last six months, I've learned to like everything I write." Our jaws dropped; we were startled—in a way scandalized. But I've been chewing on her words ever since, and they have led me into a retelling of the story of how people learn to write better.

The old story goes like this: We write something. We read it over and we say, "This is terrible. I hate it. I've got to work on it and improve it." And we do, and it gets better, and this happens again and again, and before long we have become a wonderful writer. But that's not really what happens. Yes, we vow to work on it—but we don't. And next time we have the impulse to write, we're just a bit less likely to start.

What really happens when people learn to write better is more like this: We write something. We read it over and we say, "This is terrible... But I like it. Damn it, I'm going to get it good enough so that others will like it too." And this time we don't just put it in a drawer, we actually work hard on it. And we try it
out on other people too—not just to get feedback and advice but, perhaps more important, to find someone else who will like it.

Notice the two stories here—two hypotheses. (a) “First you improve the faults and then you like it.” (b) “First you like it and then you improve faults.” The second story may sound odd when stated so baldly, but really it’s common sense. Only if we like something will we get involved enough to work and struggle with it. Only if we like what we write will we write again and again by choice—which is the only way we get better.

This hypothesis sheds light on the process of how people get to be published writers. Conventional wisdom assumes a Darwinian model: poor writers are unread; then they get better; as a result, they get a wider audience; finally they turn into Norman Mailer. But now I’d say the process is more complicated. People who get better and get published really tend to be driven by how much they care about their writing. Yes, they have a small audience at first—after all, they’re not very good. But they try reader after reader until finally they can find people who like and appreciate their writing. I certainly did this. If someone doesn’t like her writing enough to be pushy and hungry about finding a few people who also like it, she probably won’t get better.

It may sound so far as though all the effort and drive comes from the lonely driven writer—and sometimes it does (Norman Mailer is no joke). But, often enough, readers play the crucially active role in this story of how writers get better. That is, the way writers learn to like their writing is by the grace of having a reader or two who likes it—even though it’s not good. Having at least a few appreciative readers is probably indispensable to getting better.

When I apply this story to our situation as teachers I come up with this interesting hypothesis: good writing teachers like student writing (and like students). I think I see this borne out—and it is really nothing but common sense. Teachers who hate student writing and hate students are grumpy all the time. How could we stand our work and do a decent job if we hated their writing? Good teachers see what is only potentially good, they get a kick out of mere possibility—and they encourage it. When I manage to do this, I teach well.

Thus, I’ve begun to notice a turning point in my courses—two or three weeks into the semester: “Am I going to like these folks or is this going to be a battle, a struggle?” When I like them everything seems to go better—and it seems to me they learn more by the end. When I don’t and we stay tangled up in struggle, we all suffer—and they seem to learn less.

So what am I saying? That we should like bad writing? How can we see all the weaknesses and criticize student writing if we just like it? But here’s the interesting point: if I like someone’s writing it’s easier to criticize it.

I first noticed this when I was trying to gather essays for the book on freewriting that Pat Belanoff and Sheryl Fontaine and I edited. I would read an
essay someone had written, I would want it for the book, but I had some serious criticism. I’d get excited and write, “I really like this, and I hope we can use it in our book, but you’ve got to get rid of this and change that, and I got really mad at this other thing.” I usually find it hard to criticize, but I began to notice that I was a much more critical and pushy reader when I liked something. It’s even fun to criticize in those conditions.

It’s the same with student writing. If I like a piece, I don’t have to pussyfoot around with my criticism. It’s when I don’t like their writing that I find myself tiptoeing: trying to soften my criticism, trying to find something nice to say—and usually sounding fake, often unclear. I see the same thing with my own writing. If I like it, I can criticize it better. I have faith that there’ll still be something good left, even if I train my full critical guns on it.

In short—and to highlight how this section relates to the other two sections of this essay—liking is not same as ranking or evaluating. Naturally, people get them mixed up: when they like something, they assume it’s good; when they hate it, they assume it’s bad. But it’s helpful to uncouple the two domains and realize that it makes perfectly good sense to say, “This is terrible, but I like it.” Or, “This is good, but I hate it.” In short, I am not arguing here against criticizing or evaluating. I’m merely arguing for liking.

Let me sum up my clump of hypotheses so far:

- It’s not improvement that leads to liking, but rather liking that leads to improvement.
- It’s the mark of good writers to like their writing.
- Liking is not the same as evaluating. We can often criticize something better when we like it.
- We learn to like our writing when we have a respected reader who likes it.
- Therefore, it’s the mark of good teachers to like students and their writing.

If this set of hypotheses is true, what practical consequences follow from it? How can we be better at liking? It feels as though we have no choice—as though liking and not-liking just happen to us. I don’t really understand this business. I’d love to hear discussion about the mystery of liking—the phenomenology of liking. I sense it’s some kind of putting oneself out—or holding oneself open—but I can’t see it clearly. I have a hunch, however, that we’re not so helpless about liking as we tend to feel.

For in fact I can suggest some practical concrete activities that I have found fairly reliable at increasing the chances of liking student writing:

(a) I ask for lots of private writing and merely shared writing, that is, writing that I don’t read at all, and writing that I read but don’t comment on. This makes me more cheerful because it’s so much easier. Students get better without me. Having to evaluate writing—especially bad writing—makes me more likely to
hate it. This throws light on grading: it's hard to like something if we know we have to give it a D.

(b) I have students share lots of writing with each other—and after a while respond to each other. It's easier to like their writing when I don't feel myself as the only reader and judge. And so it helps to build community in general: it takes pressure off me. Thus I try to use peer groups not only for feedback, but for other activities too, such as collaborative writing, brainstorming, putting class magazines together, and working out other decisions.

(c) I increase the chances of my liking their writing when I get better at finding what is good—or potentially good—and learn to praise it. This is a skill. It requires a good eye, a good nose. We tend—especially in the academic world—to assume that a good eye or fine discrimination means criticizing. Academics are sometimes proud of their tendency to be bothered by what is bad. Thus I find I am sometimes looked down on as dumb and undiscriminating: "He likes bad writing. He must have no taste, no discrimination." But I've finally become angry rather than defensive. It's an act of discrimination to see what's good in bad writing. Maybe, in fact, this is the secret of the mystery of liking: to be able to see potential goodness underneath badness.

Put it this way. We tend to stereotype liking as a "soft" and sentimental activity. Mr. Rogers is our model. Fine. There's nothing wrong with softness and sentiment—and I love Mr. Rogers. But liking can also be hard-assed. Let me suggest an alternative to Mr. Rogers: B. F. Skinner. Skinner taught pigeons to play ping-pong. How did he do it? Not by moaning, "Pigeon standards are falling. The pigeons they send us these days are no good. When I was a pigeon . . ." He did it by a careful, disciplined method that involved close analytic observation. He put pigeons on a ping-pong table with a ball, and every time a pigeon turned his head 30 degrees toward the ball, he gave a reward (see my "Danger of Softness").

What would this approach require in the teaching of writing? It's very simple . . . but not easy. Imagine that we want to teach students an ability they badly lack, for example how to organize their writing or how to make their sentences clearer. Skinner's insight is that we get nowhere in this task by just telling them how much they lack this skill: "It's disorganized. Organize it!" "It's unclear. Make it clear!"

No, what we must learn to do is to read closely and carefully enough to show the student little bits of prato-organization or sort of clarity in what they've already written. We don't have to pretend the writing is wonderful. We could even say, "This is a terrible paper and the worst part about it is the lack of organization. But I will teach you how to organize. Look here at this little organizational move you made in this sentence. Read it out loud and try to feel how it pulls together this stuff here and distinguishes it from that stuff there. Try to remember what it
felt like writing that sentence—creating that piece of organization. Do it some more.” Notice how much more helpful it is if we can say, “Do more of what you’ve done here,” than if we say, “Do something different from anything you’ve done in the whole paper.”

When academics criticize behaviorism as crude it often means that they aren’t willing to do the close careful reading of student writing that is required. They’d rather give a cursory reading and turn up their nose and give a low grade and complain about failing standards. No one has undermined behaviorism’s main principle of learning: that reward produces learning more effectively than punishment.

(d) I improve my chances of liking student writing when I take steps to get to know them a bit as people. I do this partly through the assignments I give. That is, I always ask them to write a letter or two to me and to each other (for example about their history with writing). I base at least a couple of assignments on their own experiences, memories, or histories. And I make sure some of the assignments are free choice pieces—which also helps me know them.

In addition, I make sure to have at least three conferences with each student each semester—the first one very early. I often call off some classes in order to keep conferences from being too onerous (insisting nevertheless that students meet with their partner or small group when class is called off). Some teachers have mini-conferences with students during class—while students are engaged in writing or peer group meetings. I’ve found that when I deal only with my classes as a whole—as a large group—I sometimes experience them as a herd or lump—as stereotyped “adolescents”; I fail to experience them as individuals. For me, personally, this is disastrous since it often leads me to experience them as that scary tribe that I felt rejected by when I was an eighteen-year-old—and thus, at times, as “the enemy.” But when I sit down with them face to face, they are not so stereotyped or alien or threatening—they are just eighteen-year-olds.

Getting a glimpse of them as individual people is particularly helpful in cases where their writing is not just bad, but somehow offensive—perhaps violent or cruelly racist or homophobic or sexist—or frighteningly vacuous. When I know them just a bit I can often see behind their awful attitude to the person and the life situation that spawned it, and not hate their writing so much. When I know students I can see that they are smart behind that dumb behavior; they are doing the best they can behind that bad behavior. Conditions are keeping them from acting decently; something is holding them back.

(e) It’s odd, but the more I let myself show, the easier it is to like them and their writing. I need to share some of my own writing—show some of my own feelings. I need to write the letter to them that they write to me—about my past experiences and what I want and don’t want to happen.
It helps to work on my own writing—and work on learning to like it. Teachers who are most critical and sour about student writing are often having trouble with their own writing. They are bitter or unforgiving or hurting toward their own work. (I think I’ve noticed that failed PhDs are often the most severe and difficult with students.) When we are stuck or sour in our own writing, what helps us most is to find spaces free from evaluation such as those provided by freewriting and journal writing. Also, activities like reading out loud and finding a supportive reader or two. I would insist, then, that if only for the sake of our teaching, we need to learn to be charitable and to like our own writing.

A final word. I fear that this sermon about liking might seem an invitation to guilt. There is enough pressure on us as teachers that we don’t need someone coming along and calling us inadequate if we don’t like our students and their writing. That is, even though I think I am right to make this foray into the realm of feeling, I also acknowledge that it is dangerous—and paradoxical. It strikes me that we also need to have permission to hate the dirty bastards and their stupid writing.

After all, the conditions under which they go to school bring out some awful behavior on their part, and the conditions under which we teach sometimes make it difficult for us to like them and their writing. Writing wasn’t meant to be read in stacks of twenty-five, fifty, or seventy-five. And we are handicapped as teachers when students are in our classes against their will. (Thus high school teachers have the worst problem here, since their students tend to be the most sour and resentful about school.)

Indeed, one of the best aids to liking students and their writing is to be somewhat charitable toward ourselves about the opposite feelings that we inevitably have. I used to think it was terrible for teachers to tell those sarcastic stories and hostile jokes about their students: “teacher room talk.” But now I’ve come to think that people who spend their lives teaching need an arena to let off this unhappy steam. And certainly it’s better to vent this sarcasm and hostility with our buddies than on the students themselves. The question, then, becomes this: do we help this behavior function as a venting so that we can move past it and not be trapped in our inevitable resentment of students? Or do we tell these stories and jokes as a way of staying stuck in the hurt, hostile, or bitter feelings—year after year—as so many sad teachers do?

In short I’m not trying to invite guilt, I’m trying to invite hope. I’m trying to suggest that if we do a sophisticated analysis of the difference between liking and evaluating, we will see that it’s possible (if not always easy) to like students and their writing—without having to give up our intelligence, sophistication, or judgment.

Let me sum up the points I’m trying to make about ranking, evaluating, and liking:
• Let's do as little ranking and grading as we can. They are never fair and they undermine learning and teaching.

• Let's use evaluation instead—a more careful, more discriminating, fairer mode of assessment.

• But because evaluating is harder than ranking, and because too much evaluating also undermines learning, let's establish small but important evaluation-free zones.

• And underneath it all—suffusing the whole evaluative enterprise—let's learn to be better likers: liking our own and our students' writing, and realizing that liking need not get in the way of clear-eyed evaluation.

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Community-based assessment pedagogy

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Abstract

This article attempts to structure student assessment practices in the classroom. Informed by fourth generation evaluation, it discusses a pedagogy based on a recursive framework of writing, assessment, and reflection activities that move students toward productive praxis. Implemented over three semesters at a land grant university in the U.S., this pedagogy moves away from teacher-centered assessment and evaluation of student writing, and pushes students to do these things for themselves. It promotes a classroom in which students take control of all writing assignments, their instructions, assessment criteria, and the practices and reflective activities that go along with their writing. It encourages a community of writers that are implicated in each others’ writing and assessment practices, and gets them to critically engage with these practices. The article offers theoretical justifications and qualitative data from three semesters and suggests conclusions based on them.

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Keywords: Assessment; Pedagogy; Peer-review; Evaluation; Rubrics; Reflection

Like a sliver under the skin, my grading and assessment of student writing has always bothered me. Often I’d leave a student conference or the grading of a paper feeling unsatisfied with my strategies, knowing that the student will not hear the good in my comments, only see the disappointing grade. And that grade will overdetermine not only how that student understands her writing in my class, but our relationship and her ability to grow as a writer. The pedagogical advice I got in grad school to “just get them to write and write a lot” doesn’t work most of the time. The problem lies, as I have come to see it, in the fact that my past students weren’t a part of the assessment process at all. They didn’t contribute to the creation of
the assessment rubrics used, the assessment processes, or the figuring of grades. These were things I did because I apparently knew best. But there was a time when I didn’t know best, yet I was allowed to do these things as a first-year graduate teaching assistant. In a few years, I began to learn what “good writing” could mean in various contexts, how to see this in writing, and talk about it to others. In short, I learned what good writing was by assessing writing myself and talking to others about it. In soft terms, this is what community-based assessment is all about.

In a 2002 *College English* article, Brian Huot urges us to “create a new, shared discourse for understanding assessment as a positive force for the teaching of writing” (2002b, p. 165). In the same year in *(Re)Articulating writing assessment for teaching and learning*, he says that not only do we need to “talk about assessment in new ways” and “recognize how ubiquitous it is within the process of reading and writing” (2002a, p. 4) but that

(we need to articulate a much more conscious, theoretical and practical link between the way we think about assessment and the way we think about teaching, research and theorizing of writing, recognizing that assessment is a vital component in the act of writing, in teaching writing, and in the ways we define our students, courses and programs. (p. 11)

Effective writing pedagogy should seriously consider real student involvement, suggests Huot, in the processes of response, assessment, evaluation, revision, and grading. In fact, he says that we must “teach students how to assess” themselves, otherwise “we fail to provide them with the authority inherent in assessment, continuing the disjunction between the competing roles of student and writer” (2002b, p. 169).

In this article, I attempt to respond to Huot’s call by offering a pedagogy, a community-based assessment pedagogy, that integrates assessment with the teaching of writing so that students not only learn to assess themselves, taking active learning stances in the classroom, but they begin to articulate how assessment and writing work in their own practices — theorize — that is, they begin to be more self-conscious, reflective writers. First, I discuss briefly how institutional pressure from grades and traditional teacher evaluations on student writing negatively affect the classroom practices I want to encourage, and so I don’t do them. Second, I describe the three key components to my course: a class-constructed assessment rubric, the assessment practices that revolve around it, and frequent reflection activities that ask students to think explicitly about assessment. Third, I argue that when students assess and reflect on rubrics and their assessment practices in public spaces, it helps them become more critical, self-conscious, and hopefully better writers.

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1 While Huot consciously uses “assessment” and “evaluation” interchangeably in both his article and book quote, I’m working from Stephen Tchudi’s terms in his introduction to *Alternatives to Grading Student Writing* (1997, p. xiii).
Community-based assessment pedagogy asks students to take control of all the writing and assessment practices of the class, including, as Ed White (1994), Brian Huot (2002b), and others have already suggested, the creation of assessment criteria, rubrics, and writing assignments. Condon and Butler (1997) support this kind of pedagogy in their textbook, *Writing the Information Superhighway*. In their chapter on “Assessing Writing,” they state to their student readers: “If you leave this course dependent on the teacher to tell you what your writing needs, then this course has failed in its mission” (Condon & Butler, 1997, p. 91). My mission is similar, but I add that in order to do this my students must leave my course with the beginnings of a theorizing (or at least an understanding) of their own writing and assessment practices. They can’t get this if I assess their writing for them. In fact, Ed White urges us to get students to develop criteria, share that criteria, involve students in the creation process, and use that criteria to assess and evaluate their practices (White, 1994, pp. 18–19). Brian Huot emphasizes that we shouldn’t divide “assessment and teaching into separate entities” (2002b, p. 163) because it “misrepresents the process of writing,” excluding the “reflection and recursion” inherent in the process (p. 168). Writing and assessment should be two faces of the same process taught in classes. Both rightly see student involvement and ownership of rubrics, assessment practices, and reflection on those practices as vital to student growth and sound pedagogy. Huot (2002b), however, points out that the processes of assessment and evaluation can’t be extricated from those of writing in general; they are a part of the entire process. I agree, and elaborate: effective and productive assessment, like writing to communicate, is done in community by community members. Rubrics and their assessment practices should, therefore, be sites for reflection as well, so that the rubrics can spur richer ways to evolve as writer, assessors, and theorizers of language.

1. Institutional pressure of grades

I won’t rehearse here all the arguments against grading but will highlight a few issues related to the functioning of my pedagogy and classroom. As you’ll quickly see, traditional teacher-centered evaluation and assessment, even grading, play very little part in my classroom. I do not assess, evaluate, or grade my students writing, yet they still receive course grades, as well as assessments on

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2 Many have shown that traditional teacher-centered grading is dubious at best, inhibiting and harmful to students on average. Liesel K. O’Hagan explains that while grading emerged in the US around 1850, “studies as early as 1912 questioned the validity of grading, suggesting that in writing instruction, grades were far too subjective (Ellsworth and Wllison 1988)” (1997, p. 4). More recent scholarship, O’Hagan says, is overwhelmingly against it. Summarizing much of Howard Kirschenbaum’s 1973 research, O’Hagan identifies the main problems in grading practices: they are scientifically invalid (p. 6), provide “false motivation” (p. 8), give a “false sense of worth” (p. 10), provide “superficial learning” (p. 10), produce a “barrier between students and teachers” (p. 11), and lead to “uncreative teaching” (p. 11).
everything they write. It’s not a contract system, nor a default grade system. At
the end of the semester, each student and I discuss and come to some agreements
about their portfolio grade in private conferences that they manage. Fig. 1, adapted
from Stephen Tchudi’s own similar figure (1997, p. xiii), illustrates a point that
many have made already: There are institutional pressures to evaluate and grade
student writing acting on us, in our comments, and in our relationships with our
students. It is “our job” to do these things. Chairs, deans, students, tax payers,
and colleagues expect us to grade. This is how students learn how to write and
know when they are wrong, goes the logic. It’s the way we’ve always done writing,
the way the institution can monitor how well we’re teaching, or how tough our
“standards” are, they say. And it’s the way other instructors (past, present, and
future) will continue to teach writing to students in other classes. So why does
my pedagogy not allow me to assess, evaluate, or grade my students’ writing?
Because it’s not fair since I’m already asking them to assess each other and revise
based on those assessments. If reading is a hermeneutical act in which an assessor
brings dispositions and values to a text, then using student assessments for revision
purposes is risky, mostly for the students, and they know it.

At another level, for me to evaluate or grade my students’ writing would reduce
their writing and assessment practices to mere busywork, meaningless activities
with little educative value and no real communicative function. Their own rubrics
and assessments — what they come to understand about writing and then apply to
others’ work — would mean even less in this kind of environment. The weight of the
teacher’s feedback always trumps a student’s, even an entire class of students. Our
class would fall into a familiar paradigm: teacher assigns writing, students write,
teacher evaluates writing. The teacher still ranks everyone, still gives the grades.3
Sarah, a recent student of mine (and quite typical), reflects on the communicative
function of her writing in our class, saying that because her ideas for our rubric and
about her peer’s writing count in our class, she can “write to get [her] message out
whereas in other English classes, [she] would be entirely trying to please the teacher.” Robert E. Probst’s early discussion encapsulates what others
like Ed White, Brian Huot, and William Condon have said in other places since, but
focuses our attention on the student–teacher relationship and its power dynamics:

Ultimately, students must become their own evaluators. In essence, we are asking
teachers to help wean students from a simple view of the world. We want students
to see teachers not as right authority figures to be deferred to, nor as wrong
authority figures to be rejected, but as individuals, representing a culture and a
discipline, with whom to talk. (Anson, 1989, p.77)

3 I have deeper, more significant, problems with grading, bell curves, and ranking that go beyond
the scope of this article. Alfie Kohn’s (1993) *Punished by rewards: The trouble with gold stars, incent-
tive plans, A’s, praise, and other bribes* is particularly insightful and convincing. Kohn uses a social
psychological direction, showing how Skinnerian behavioral “pop psychology” is pervasive in our
culture, flawed in its reasoning, and damaging to intrinsic motivation in education, on the job, and in
child rearing in long-term results.
Fig. 1. Tchudi’s (1997) distinctions between response, assessment, evaluation, and grading, and my course activities’ placements on this continuum.
In the end analysis, should I assess and give grades, they’ll figure out what’s really going on: They’re writing and I’m evaluating. It’s the same old thing. The bottom line is: They have little need to form active learning stances and few opportunities to develop into self-conscious, reflective writers. And more importantly, they haven’t been pushed to become agents in their own education: How will my writing course help them in their future writing? Have they addressed how their self-assessments might diverge from their teacher’s or their peers’? Have they explored how they might find reliability in a network of varying and vying voices making evaluative claims about their texts? In short, have they struggled with an understanding of assessment as it pertains to their writing? These are the core questions my pedagogy attempts to urge students to explore through a framework of repeated assignments, and class-constructed rubrics.

2. The course’s basic framework

All three iterations of my community-based assessment pedagogy (over three semesters) have been for a course called Writing and Rhetorical Conventions (a 300-level English course) at Washington State University. Most of my students were in their early 20s, non-English majors, and in their third year. While the majority of my students are men, women typically make up about 40–45% of each class. Because of the institution’s general ethnographic makeup, I’ve only had five African–American students (two men, three women), five Asian–American Pacific Islander students (four women, one man), and one international Asian student (a man).

To understand the rubric and assessment practices, it’s important to see the context in which it functions, that is, my course framework of re-occurring assignments. During a 15-week semester, each student will write and post on our Internet discussion board (e.g., WebBoard or WebCT\(^4\)) two paragraphs (150 words each), two position papers (one to two pages each or about 350–400 words), and two essays (six to eight pages each or about 2,100 words) (see Fig. 2).

Each piece is assessed, then revised, and saved for possible inclusion in the course portfolio. Each also may be used to begin the next piece, so position paper one might help develop essay one (the next paper). To give us time to look at everyone’s position paper in class, students sign up for specific due dates to post their work. Before each designated class session, everyone prints, reads, and writes assessments for the two or three position papers due that day. Fig. 2 shows this cycle of activities, which we go through twice in a semester, and it leaves us about one week in the middle and two weeks at the end for conferences and finishing up. On our second time through the cycle, however, we skip the paragraph activities

\(^4\) I’ve also used listservs and listprocs, but I find that discussion boards are nicer for everyone since (by their nature) they archive all work produced in the class, and I can organize them in a variety of ways (e.g., by week, by assignment, by group, by draft of assignments, etc.).
and need considerably less time revising the rubric for the new position paper. Most of our time is spent on the position papers and their assessments.

At the end of each week’s activities, over the weekend, I assign a reflection prompt (posted on our Internet discussion board) that typically asks students to reflect on their activities that week. I read them (without commenting or “replying” on the board), and bring a few to class for the writers to read, and the class to discuss or simply appreciate. This is primarily the place I attempt to get them thinking about assessment, their writing, the rubric and its process of creation, and their practices. It’s also a place where they can voice resistance, ask questions, or suggest things to the class.

Before we can write the position papers, however, we spend about a week and a half discussing at length what we want out of them, what we each want to write about, and what we expect to read and assess. We also create their first assessment rubric. It has to be something that everyone can buy into, use as writers and assessors, then easily revise as we move from position paper to essay, to new position paper. I set it up as something that is constantly revisable by them. To test and revise the rubric, we write two separate paragraphs, each receiving three peer-assessments that use our in-process rubric. The paragraphs are written quickly, both finished over a two-week period. Everyone’s paragraphs, because they are
short and relatively easy to produce, are due on the same day. We talk very little about them in class as writing, but they are assessed formally, just as the position papers will be in the near future. We then use what we’ve learned from the paragraph assessments to revise our rubric. This rubric then becomes the starting point for our first position paper’s rubric, which can be ready for use in one or two class sessions.

The cornerstone assignment in this repeated sequence is the position paper since the paragraphs just get us warmed up and used to the process and sequence of tasks. Over about a month’s time, each student will write a position paper, receive responses and assessments from the entire class (both on paper and through class discussions), post a revision of the position paper based on those discussions and input, get a more formal peer-assessment of the revision by a few colleagues, write an essay (often based on the position paper), and finally receive a formal peer-evaluation of the essay. Once we’ve done the essay evaluation, we start over again with position paper two. This repeated framework (done twice in a semester) allows the student to continually revisit, re-see, and revise her writing practices — not just drafts — in four ways: (1) as a co-developer of the standards by which all writing will be judged, (2) as a writer who reads a wide variety of assessments of her writing, (3) as an assessor of colleagues’ writing, and (4) as a colleague who compares her assessment and writing efforts to others’. So the recursive part is in the various angles students must approach writing and assessing over time. Additionally, as I’ll discuss later in more detail, our weekly reflection activities reinforce this recursion by giving a space for questions and theorizing. This framework starts with, and continually returns to, our class rubric, which forms the primary focal point of our initial discussions on writing and our ongoing assessment activities and reflections throughout the semester.

3. The rubric and its process

During the second week, we create our first paragraph assessment rubric (it takes the entire week). To get us started, I typically ask each student to find a “paragraph of good writing” that best fits the kind of writing she understands our paragraph assignment is asking for, and one she’d want to read if written by her colleagues. From this paragraph, each student prepares some observations she’ll use in class discussions with her peers. I ask them to think about how the paragraphs they’ve chosen support their claims, what kind of evidence each uses, how the writer provides insight or analyzes details, and what elements make each paragraph meaningful. Additionally, I ask them to consider and identify the

5 In “Demystifying grading: Creating student-owned evaluation instruments,” Kathleen and James Strickland offer other ways to involve students in the evaluation practices of the classroom; of note here is their brief discussion of inductive rubrics, ones generated by inducing traits from what students consider “good writing” (Allison, Bryant & Hourigan, 1997 p. 147), which I’ve used in an altered form here.
discipline and intended audiences for the paragraphs they choose. How do those discourse communities’ assumptions match up with our purposes in the class? Since my class is geared around argumentation, rhetoric, and writing conventions, the questions, I know, we will continually explore, so I want them to consider them in this first rubric.

During this week, we create usually two to three rubric iterations, each one getting closer to a class consensus. By “consensus,” I do not mean that the class is in complete and full agreement, only that hard agreements have to be explicitly made eventually, despite some individuals’ disagreements about a few particulars in the rubric. This is important because often I urge them to question their rubric criteria, which usually spurs lots of discussion and competing claims about writing, and highlights problems with any proposed “universal” criterion for writing. Some find this chaotic and unproductive, but the point is to have the discussion and begin to cultivate a culture of dialectical vying. I want our rubric process to open a space for de-constructing their rhetorical practices and conventions. I also want it to problematicize their notions of some static, essential, “correct” assessment or grade that goes with each piece of writing. Is it really possible to have this, and what has allowed us to assume this claim about the value of any given text? I don’t want us to blindly reproduce rhetorical conventions without interrogating why they are used, and how various folks in the class see their effectiveness and value. The practical side to this is that we can then make better decisions about why each element of the rubric should be there for our purposes. For instance, how does “offering support” (as a rubric criterion) serve our purposes for the assignment we’ve given ourselves, for learning in our class, for informing, exploring, or persuading (or whatever we set our mutual purpose to be)? What kind of support are we actually talking about and why that kind? We don’t have to come to final conclusions. Instead I suggest that we raise important questions, discuss them, make some tentative decisions, then log the questions and come back to them continually during the semester. The important thing is that they do the constructing and revising, so that they have ownership of the language and contents of whatever rubric we end up with.

In a recent course we began the process in our second week of class. My students got into groups, shared their notes and paragraphs, discussed, and produced rubrics to offer the class for discussion. I gave them a simple structure to use when writing these rubrics, a statement followed by a list of verb phrases. I reiterated to them that we are not interested in a rubric that will identify an “A” paragraph or an “exemplary,” or “outstanding” one — this isn’t a set of grading criteria — instead our rubrics should help us identify proficient paragraphs, ones that do the job we ask of each other in the assignment handout. It’s a list of proficiency markers only. If a paragraph does what these verb phrases identify, then the paragraph has done its job. While we would continually talk about making things work better in papers (i.e., excelling in each rubric dimension), all we cared about at this point was the sweet-spot of “proficiency.” After about 20 minutes, we talked as a class about each rubric, pointed out nice features, then re-convened in groups, and revised our rubrics quickly. I collected them and posted on our Web site a class version based
on what seemed to be a consensus in the rubrics I collected. I tried hard to use the language produced from the class, not mine. Here’s what they came up:

A proficient and adequate paragraph will . . .

- Contain a consistent claim
- Support claim with appropriate evidence (when needed)
- Elicit thought on the part of the audience
- Adapt to or consider its audience
- Use clear and concise language
- Use appropriate language and grammar
- Contain three or more sentences

Since none of the groups’ renditions paid much attention to an order of importance, I ordered this list in bullet fashion and put the most repeated criteria at the top of the list.

For the following class session, I asked everyone to bring this first official version with revisions and suggestions marked on their copies, correcting me where I made a mistake or misinterpreted our discussion. And again, I structured their re-thinking, pointing them toward specific features of the rubric to re-consider, things we didn’t get a chance to talk about: specific language choices, hierarchy of elements, elements that said the same thing or that can be combined easily, and conceptual groupings of the elements present (headings), etc. In our following class discussion, I tried not to make evaluative statements about their rubric, but instead asked them to explain and explore what each criterion means: why it was needed, what does it look like in a paragraph, and how would one locate it when reading paragraphs? I let them answer without much commentary on my part beyond occasionally summarizing points, or asking clarifying questions. I let them talk it out, and asked a student to “take notes” for us, which I used to revise their rubric after class.6 I had to accept whatever they came up with, and I told them this, but I also told them it was their job to provide adequate justification for criteria and be able to agree as a class on the rubric eventually. From this more detailed and nuanced class discussion, we formed a more finalized rubric, which I posted:

A proficient and adequate paragraph will . . .

I. Clarity of thought
   - Contain a consistent claim
   - Support claim with appropriate evidence (when needed)

II. Proper etiquette
   - Contain three or more sentences
   - Use appropriate language and grammar
   - Use clear and concise language

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6 In retrospect, I think I should have asked more than one student to take notes in order to get a fuller account or our discussion.
III. Writing to the reader

- Be complex enough to elicit thinking beyond basic observations
- Challenge and/or engage its audience
- Adapt to and consider its audience

Here, most in the class liked the idea of grouping the criteria under headings, so as to have a better understanding of what they were asking of themselves and what they were going to look for when assessing. They also altered some language and added one element in the “Writing to the reader” section. Most felt that “complexity” was a good component to focus on when thinking about what would “elicit thinking beyond basic observations.” And this seemed to match well with the new criterion to “challenge and/or engage” the audience, and the final one in that section. The class felt the first two were talking mainly about content, whereas the third element in that section was dealing with style and rhetorical approach. Everyone, however, still unanimously thought that placing the rubric in hierarchical fashion was not a good idea. All elements were in effect of equal weight. Their thinking was quite logical. These elements simply need to be there. If they are all there, the paragraph is complete and proficient. Order of importance, or weight of any individual criterion, has no bearing on this kind of judgment.

While this rubric is somewhat simple, it’s important to realize that we generated it through a week or so of discussions, reflections, and group and individual activities. Each element had been discussed, thought about, and re-visited several times, so a criterion like “support claim with appropriate evidence (when needed)” meant very specific things to our class, things we’d change in a few weeks. Most importantly, I wanted this process to be recursive, critical, self-conscious, and reflective — things that would be a big part of our assessment practices and the structure of the course.

Once we had a rubric, they used it to write and post a paragraph (over the weekend). In the following class session, we talked about how to use the rubric for assessing, what assessing meant in our class (I discuss this below), and some ways we might go about assessing the paragraphs. By the end of the week, they had posted their assessments to their colleagues’ paragraphs (three paragraphs I randomly assigned to each student), and we looked at a few in class. From these discussions, we again revised our rubric in preparation for the second paragraph (done by the following week). After this discussion, their paragraph two rubric looked like this:

A proficient and adequate paragraph will . . .

I. Clarity of thought

- Contain a consistent thoughtful claim (e.g., one that is insightful)
- Support claim with appropriate and sufficient evidence
- Weigh in on the issue at hand (i.e., take a position within the debate)
II. Writing to the reader
- Be complex enough to elicit thinking beyond basic observations
- Challenge and/or engage its audience
- Adapt to and consider its audience

III. Proper etiquette
- Contain three or more sentences
- Use appropriate language and grammar
- Use clear and concise language

At this crucial stage, the rubric became more complex and explicit. After seeing and assessing three paragraphs and looking at some in class, they saw a need for the paragraphs to focus on a “thoughtful” or “insightful” claim, not just a claim that offered simple factual information or summary (the writer should “weigh in on the issue at hand”). They also found a need to dramatically revise their ideas about support. It was now necessary for a proficient paragraph that attempted a “thoughtful” claim, to contain “appropriate and sufficient evidence.” Of particular note in this final version was hierarchy. The most convincing argument made for this need after reading the first set of paragraphs was voiced by one male student. He explained convincingly to the class that the criterion of three sentences isn’t as important as something like adequate support or a focused and thoughtful claim. While most still wanted paragraphs with at least three sentences, they did agree that some rubric elements were more important than others when considering a writer’s purpose and a readers’ perception of meaning in a paragraph (what is she communicating to me?). And the rubric should reflect the class’s priorities accurately. Interestingly, it was the continued discussion of headings and groupings that allowed the student to argue his point. In effect, he said that “writing to the reader” was more important than “proper etiquette” in writing. The class, by and large, through just one round of assessments, began to see the difference between writing from a checklist of items to include in one’s assignment, to a more nuanced understanding of the relationships among writing priorities and the difficult judging that must be conceptualized when assessing to help writers write better. While it was just a start and there was lots of disagreement, I took the changes and issues raised around the rubric to be positive signs that our class was beginning to form active learning stances in which they were learning through assessment, understanding how rhetorical conventions work, are used, and are contested in texts.

Almost a month later through similar kinds of discussions, our position paper one rubric ended up this way:

A proficient and adequate position paper will...

I. Clarity of thought, support, and details
- Focus on a single claim that is arguable, consistent, thoughtful, and takes a unique position on the issue (i.e., different from others’ stances, positions, and/or analyses)
• Sufficiently support claims with strong, specific, verifiable, and appropriate evidence
• Provide only details that are necessary, relevant, and appropriate

II. Invoking audience, intellectual engagement, and significance
• Offer significance of the writer’s position to the audience (should answer: “so what?”)
• Be complex enough to elicit thinking beyond basic observations
• Challenge inquisitively and engage intellectually its audience

III. Organization, transitions, and style
• Employ a logical structure or order that is appropriate for the discussion at hand
• Provide (when needed) transitions between ideas and paragraphs
• Have a strong control over appropriate language, punctuation, and grammar decisions
• Use proper MLA formatting conventions, particularly with quotations and other outside information used

This rubric was produced from one full week of assessing and discussing the first eight position papers. While some elements were added, some of the language became more specific and reflected our class discussions. Maybe the most striking feature is the change in headings, or rather the class’s developing sense of the three main conceptual areas they thought were most important in a position paper written to the class. While initially most disliked the idea of long, verbose rubrics that seemed hard to use, most now found it important to be as explicit and careful in wording as possible, which often meant a rubric that was meatier. Because the class was deeply engaged in the rubric at all levels, they knew it well, had nuanced notions of what each criterion meant, and so did not see this more complicated and longer rubric as verbose or hard to use (as I know my own rubrics had seemed to my past students). Finally, one important note brought up by several students during discussions of these first few position papers was the “so what” factor. The titles of some of the position papers could illustrate why this became an issue: “Modern Justice,” “Foundations of Citizenship,” “Women in Afghanistan,” and “Children of the State.” Students simply had a tough time seeing the significance — caring — in these positions posed to the class for discussion. While most were considered to have revolved around “thoughtful” and “arguable” claims, these positions still seemed distant to most in the class. This sentiment quickly became the most important rubric element in the “Invoking Audience, Intellectual Engagement, and Significance” section, and in fact, pushed us to change some of our assignment instructions in the second position paper.

This is the rubric and its basic process of creation and revision, which is structured into the writing and assessment practices of the course, and added by weekly reflection activities. The rubric is central because it forms both our discussions of writing as a set of conventions, and it’s used to assess the writing of the class. It also provides an opportunity to see how writing conventions may change as our
class’s writing purposes and needs change — this is often done explicitly in our reflections. We can talk in concrete ways, not in fuzzy ways, and ways that are connected to commonly known examples produced by the students themselves.

So they aren’t just “responding” to their colleagues, but developing assessment criteria and formulating an understanding of what writing means in the abstract, while also evolving practical assessment criteria. And as is probably clear already, the rubric means little, and cannot do all these things, unless they use it to assess.

Because of this, I try simply to provide the structures for my students to create a rubric, re-think it, write from it, use it to assess each other, and, of course, reflect continually upon all these practices. I distribute guidelines, provide due dates, post weekly reflection prompts, and pose additional questions in class that facilitate assessment discussions on student writing. In short, I try to coach them toward sound assessment practices and active learning stances by making them do the hard work of assessment. I encourage them to voice disagreement, show agreement, and elaborate and qualify ideas. I act as a facilitator, questioner, and listener when we talk about each other’s writing. I try to keep us focused on our rubric in our assessment discussions, yet not be a guard to ivory towers. When asked about what “I think” of a piece of writing or about our rubric, I try to re-direct the question to the class in an honest way, sometimes re-phrasing it, explaining that I can’t answer that question for them. Our class writing isn’t about what I want — it’s about what the class can agree on they want and can justify in some way so that agreements can be made. In this sense, our rubric is a set of hard agreements that we must make through dialogue and looking at specific writing, and our assessment practices are our attempts to judge one another’s writing from these agreements, learning along the way (as all teachers/assessors do), even if individually we disagree with a point here or there. In this atmosphere, their writing isn’t about me, it’s about them — something many aren’t used to. They can’t be passive, can’t simply accept criteria or assignments, nor can they write the way they’ve usually written in the past. My students must debate and decide on all the important decisions regarding their writing in the course from start to finish. The class is about them learning not me teaching.

Feminist pedagogy agrees with this kind of classroom, in which difference and the centrality of the male professorial voice is re-framed. Carolyn G. Heilbrun, in “The Politics of the Mind: Women, Tradition, and the University,” asks if we can “conceive [of] difference without opposition” and thus “challenge the ancient male-female binarism as an intellectual imperative” within the academy (Gabriel & Smithson, 1990, p. 31). Essentially, Heilbrun attempts to show how Trilling’s famous notion of the “life of the mind” has come to characterize academic endeavors in general. And I include the classroom in these endeavors. This notion embodies “wholly male-centered culture and university,” binarism (Gabriel & Smithson, 1990, p. 28). Furthermore, she asks: “what is lost to this ‘life of the mind’ — to mind itself, to colleges and universities, to that proud contemplation of texts and culture to which Lionel Trilling devoted his life — when women are excluded from taking their full part?” (p. 29). If we re-phrased Heilbrun’s question
to fit the writing classroom, the answer, to me, seems obvious. What is lost when we exclude most of the stakeholders in the classroom from fully participating in their own assessment and the grading processes — in their own praxis? Can a full, rich democratic community of fellow-writers, fully engaged in all aspects of their writing as active learners, critically reflective, bound together in mutual endeavors, be fostered without their own participation in the assessment and grading of their writing?

4. Community-based assessment practices

Community-based assessment pedagogy resists in theory and denies in practice the traditional way evaluation, assessment, and grading happen in the classroom. In the conventional paradigm, the teacher is the evaluator or assessor in the classroom who comes down from the mountain to bless the unclean ones, the students who are incapable of assessing themselves, or at least when it really counts. If assessment is a part of writing processes, and if we want our students to be able to assess their performances adequately, then it seems we typically give them little opportunity to practice, and thus constrain their ability to learn to write better. Fourth generation evaluation theory offers a way out of this harmful paradigm. According to Guba and Lincoln, fourth generation evaluation is based on a “hermeneutic dialectic,” which accounts for more (if not all) of the stakeholders involved or affected by the evaluation process (1989, pp. 40–41). This hermeneutic dialectic circle allows each stakeholder to offer input into an evaluation, in a kind of round-robin style, thus creating a circular process of recursive negotiation and consensus making (Guba & Lincoln, 1989, pp. 151–152). Informing heavily this dialectical process is a constructivist methodology (as opposed to a “scientific mode” or positivist model) (Guba & Lincoln, 1989, pp. 44–45). So stakeholders always have a say in effective and productive evaluation criteria, what those criteria mean, and their associated processes of evaluation. This agrees with how rhetorical conventions exist and function in real life. Good writing isn’t static or apart from contexts, purposes, audiences, assessments, and writing practices, as well as their modes of production and distribution. If “facts” require a “value framework” in order for them to be valid or understood, as Guba and Lincoln state (1989, p. 44), then why not offer a classroom context that explicitly acknowledges this, addresses it, and constructs stake in assessment as well as writing? Having stake in these processes means students can critically engage their writing as meaningful practices situated within community for particular purposes. Most importantly, what fourth generation evaluation theory demonstrates to us is that to have effective and productive assessment, assessment that teaches, all stakeholders involved in assessments must be a part of the entire process. Students can’t simply be recipients of assessments. They must be central to the practices in the classroom.

Students must assess each other — this is fundamental to my pedagogy. But “assessing” isn’t simply “responding” to writing. These activities are different in

my classroom, as Tchudi’s diagram shows (see Fig. 1). The assessment practices in my course do not work as well when students are allowed to respond to writing in unstructured ways. While open-ended responses may encourage revision, ask explorative questions about a text, and assume writing is a process of learning and meaning making, as Tchudi explains (1997, p. xiv), its purposes are less explicit and can be too random and generative to help writers focus on revision and adequately formulate practices that will help them in future writing endeavors. Response also doesn’t allow us to reflect well on our rubric since it doesn’t assume it as a set of priorities from which to read. “Assessment,” on the other hand, says Tchudi, is a process in which the reader/writer primarily reads and revises for ideas and refinement that are guided by criteria or values (often explicit). It’s a process that looks to discover how the writing can be the fullest, which areas need growth, and which areas need trimming — what’s good in the writing and what’s not. It addresses context and evolving criteria, makes judgments about what’s on the page, stops exploring every avenue of interest, and pursues only those that make sense, seem most profitable and appropriate (Tchudi, 1997, p. xiv). This is what I want my students to do. Their assessments use our rubric as a reading grid, pointing to potential and revision along its dimensions. We try to put on our rubric as a pair of glasses, so to speak, when reading to assess. Assessing, then, is a way of reading and responding that’s filtered to catch only our class’s expressed priorities.

For my students, responding tends to be easiest since it doesn’t assume a rubric, and most have done it more than anything else when “critiquing” writing in school, so I push most for assessing, knowing that they may slide into responding (i.e., move away from our rubric, or not link comments to it, when discussing a colleague’s work). In all their assessments, I ask them to ignore “errors,” and certainly not mark them or call attention to them. We assume they’ll be revised out later on since assessment happens in the middle stages (or even the front end) of their drafts’ evolutions. Instead, I ask them to focus on potential in the writing in the areas our rubric identifies. The student judges the paper according to the rubric, makes a brief, specific comment for each criterion (a sentence or two) that shows the writer where the potential seems to be, and includes a short general assessment of the paragraph that points to the place the writer should revise first, or some overarching questions from which the writer might begin. It’s about a page long. That’s an assessment, and it’s, in effect, what they’ll do for each major writing assignment in the class.

Ryan’s first formal assessment of Brad’s paragraph two is fairly typical in length and approach (See Fig. 3). Like about half of the class, Ryan uses the larger conceptual headings of the rubric to organize his assessment by paragraphs (i.e., clarity of thought, writing to the reader and proper etiquette). While he talks explicitly about three of the rubric criteria, he could be more explicit about some of the criteria the class felt were particularly important, like “be complex enough to elicit thinking beyond basic observations” and “weigh in on the issue at hand.” But his assessment is doing a few things right. It supports its claims about the
text’s main claim and pushes Brad to see potential in engaging the audience. While it could still be more specific, discuss all of the rubric criteria, and offer a general overall assessment of the paragraph, Ryan does center his assessment on the rubric’s priorities, thus Brad has a place to begin revising in order to meet our rubric’s demands and can now compare Ryan’s suggestions to his other peers’ assessments, which should discuss the same rubric dimensions. In fact, Brad’s other two assessments, focus most of their attention on the same area of the rubric that Ryan did. Ian, who comments on each rubric element, offers this assessment for the second element in the “Writing the reader” section: “I feel your paragraph was somewhat engaging but I feel you didn’t really challenge the reader. You might want to try to incorporate the reader into your writing. You may do this by asking the reader a question or telling the reader something to engage him in your writing.” Again the language is suggestive and formative, not summative. Ian essentially agrees with Ryan. While Ryan suggests engaging the class with content (i.e., “the importance of Aristotle’s definition and its importance for our society”), Ian offers a strategy of questioning that pulls readers in. Tyler, the third assessor for Brad’s paragraph, also saw this same area as the key place of potential. His assessment combines Ryan’s and Ian’s. He says, “I felt that you were able to engage the audience but didn’t really challenge [us]. If you decide to write more on this paragraph you could try further explaining the last part about the double standard. What can we do about this double standard? That would be a good way to challenge the reader...” All saw the same rubric element, under the heading of “writing to the reader,” as the issue for Brad’s revision. Ryan and Ian assessed in terms of “engagement,” while Tyler assessed it in terms of “challenge.” All three assessments offer convenient ways to synthesize vying voices on the text, but the presence of three provides Brad with the opportunity to make some critical decisions as a writer, not blindly takes one assessment as a true assessment, or rejects one because the assessor “didn’t like his topic.”

Writers must become more responsible for their revisions in this scenario. They are pushed to read critically for patterns across assessments and areas that seem to cause readers to read in different and similar ways. There tends to be more of the rubric assessed, but more importantly, if the writer is reading her assessments
carefully, revisions suggest themselves, decisions about revision begin to be more concrete. So while each assessment by itself might be considered somewhat inadequate, the three together offer a fuller and richer assessment for Brad to consider. Of course, this is only the second opportunity to assess. So when we discuss assessments like these three as a class — which we do — we do so in order to find new strategies for articulating assessments and ways writers can read their often contradictory assessments in profitable ways. We also discuss the missing rubric dimensions not discussed.

This means that in all class discussions around our rubrics and assessments, I push them to grow as assessors. We look for assessments that help writers do the job we’ve given them, and then try to explain why they work well. In this way, their assessments and our discussions about them are formative in both form and function. In these discussions, I ask my students to explain to each other what seems most helpful, and why. They summarize, elaborate, and revise practice in the classroom with their peers, that is, theorize. I want them to think of assessment in specific ways, not in the ways they may be used to when “critiquing” colleagues’ writing — but I do not tell them how to do things “right,” instead we derive this from what’s posted. But assessments do have purposes and they affect the assessments themselves. Thus we reflect on what assessment and revision are, what they mean for us in this class, what the purposes are for these activities, and most importantly, how to frame judgments for their colleagues in profitable ways. For the class’s benefit, I also ask them to reflect on assessment as a way to find potential in working drafts, to question assumptions in the text, and to theorize what they are doing. From these discussions and reflection activities, we revise the rubric, and maybe our individual practices.

And assessments always generally improve. Again, Ryan’s improvement is typical. In his formal assessment of Brett’s position paper one (about one month later), Ryan assesses along more of our rubric’s dimensions, and is more detailed (see Fig. 4). Partly this is to do with assessing a slightly longer piece, but much of it is due to the activities that surround assessment and more practice. Ryan’s assessments are more specific and suggest more for Brett. He engages in a dialogue with Brett as a fellow writer in the class. He offers friendly suggestions, states his ideas and reactions, remains fairly detailed, and keeps most of these comments pointed at Brett’s text. His final overall assessment, which he didn’t have in his earlier assessment, reinforces the primary concern he has already identified in the first area of the rubric (i.e., “connect your points about Bush and Pericles’ use of patriotism as being deceptive”), which is where Brett’s revision should begin. This closer attention to our rubric dimensions, discussion-based assessment strategy, and inclusion of an overall assessment are all areas Ryan’s first assessments could improve on — and he did. Ryan and I had no conferences, nor did I speak to him specifically about his assessments. He was able to do this, like most other students, all by himself. This probably couldn’t have happened so easily if we weren’t continually discussing and reflecting on assessment as a class, looking at weekly reflections together, talking about individual assessments, and writing
daily informal assessments of first drafts of every position paper. The repetition in
my pedagogy seems to provide this kind of development.

The key to making assessment work pedagogically is periodic reflection on
the assessment activities. I do it once a week, done over each weekend. I give them
general, open-ended prompts to point them to the areas I want them to reflect on.
For a prompt during week 11 that asked the class to consider how their assessment
practices had gone so far (I asked them to compare an early reflection on what “as-
sessing” meant and their own assessments of the first position paper), Brad says,7

I think that I [am] actually looking deeper into the papers of my classmates.
Before I would just look at a paper and say “wow, this is really good” and leave it
at that. But now it seems as though I [am] going underneath the story and figuring
out why I was so compelled by this story and what made it good. I guess I [am]
starting to realize what the key components of a good story are.

Not only is Brad theorizing about assessment (i.e., he looks “underneath the
story” and asks “why”), seeing the good and growth in his assessment practices,
but he’s allowing others to profit from his experience. These reflections are all

7 For clarity, I’ve made slight typographical changes to all the student quotations that are presented
in the text of my discussion.
public, posted on our Internet discussion board. I highlight a few in class (six or so at the start of each week), asking the writers to read portions of them to the class. We then talk about them, or sometimes, we just let them stand.

Oftentimes, these reflections can help students identify problems they are having. Catarina, in the same week’s reflection, says,

In assessing others, I’ll be honest, I tend to rush through and conclude with minimal suggestions. I recognize this through reading my last assessment and know that making real suggestions is the only way to benefit the writer. I know the feeling of frustration when someone says “good job,” or “good start.” So, instead of making comments like that I hope to really pin-point the problems areas by being specific and making comments like, “Paragraph 2, Line 3 is awkward or unclear,” and then giving a suggestion on how to fix the problem.

Here Catarina not only honestly identifies her area for growth in her assessment practice, but she links it to her responsibility to her colleagues in the class. Additionally, she thinks up a good strategy for better assessments in the future. Again, praxis is formed by reflecting about practice. So while she has not assessed satisfactorily in the past, maybe even cheated a few of her classmates, her public reflection (this was one we discussed that week in class) offers the class an opportunity to benefit from her mistake and reflective insights — a mistake arguably worth making in the context of the entire class. Reflections like this one, which are typical, give the class a chance to see that growth is more important than ignoring failings and better assessment can come out of reflecting on our past practices. Maybe most importantly, by looking at Catarina’s reflection, the class was able to theorize about assessment practices and responsibility.

Often, however, my classes offer both me and my students opportunities to articulate larger assessment issues, ones that can reach far beyond our classroom, even if only in personal terms. In a reflection after our essay evaluation exercise, Elizabeth illustrates a fairly typical problem between the acts of evaluation/assessment and the grading that many teachers feel every term. Elizabeth, who continually found it hard to cope with the rubric and assessments by her peers, explains that her evaluation and grading process was hard despite knowing clearly the criteria we’d established. In fact, this was the problem. Illustrating an Elbovian compassionate reading of her peer’s paper, she says, “[i]t’s hard when you set criteria... particularly when you read a paper...”

The essay evaluations are essentially longer, more formal assessments that tend toward summative judgments and focus on lesson potential. In these, I ask them to talk in more summative terms (not formative) in their final general comments or endnote, while sticking to the shorter assessment-style comments when discussing each rubric element. Additionally, I ask them to put a mock grade on the paper. This agrees somewhat with how Tchudi identifies “evaluation.” He says that it focuses on audience concerns (maybe exclusively), judges through external criteria, is descriptive and summative, ranks writing products, and directs for the future. It demands judgments of effectiveness from standardized sets of values (1997, p. xii). Peter Elbow contrasts grading with evaluation, calling it “ranking,” or “a summing up of one’s judgment... into a single, holistic number or score.” He concludes that “[t]he implications are, of course, quite different. Evaluation implies a single scale or continuum or dimension along which all performances are hung” (1998, p. 175).
get to a paper, Christina’s, and her strengths weren’t what I felt was important — then what, change my rubric to accommodate? . . . that’s unethical . . . it’s difficult to grade a great paper that just didn’t fit our criteria.” In effect, she moves through a process of understanding “the mystery of liking” another’s writing, that is, “to be able to see potential goodness underneath badness” (Elbow, 1999, p. 192). And more importantly, she frames the “badness” of the paper not in such essentialized terms, nor even in terms of “badness,” but as strengths that just don’t “fit our criteria.” Despite her unease, Elizabeth shows how “good” and “bad” writing are tough contextual judgments, mediated through a set of values (our rubric), made in community. She couldn’t have understood so well this insight if I had told her it or explained it to her in an endnote on her own paper. Yet Elizabeth clearly sees this problem in Christina’s paper. Moving from assessment to evaluation and grading helps most of my students find these kinds of insights and critical ways of reading, despite some healthy discomfort.

But community-based assessment pedagogy also offers ways to build a pragmatic sense of community that is active and purposeful. I’m not talking about a fuzzy, cum-by-ya community, but a tangible set of practices that make students rhetorically and ethically face each other, listen, and act on each other’s words. And again, it starts from our rubric and assessment activities. They are the common places for us to know each other — to bind us in common practices and purposes. In the 10th week of a recent course, Kelly reflects on what she’s come to learn after an essay evaluation and grading activity we’ve done. She explains that “[i]t is important to recognize that the only barometer of the effectiveness of your writing is through feedback from the reader and their interpretation of your text. It is often said that actions speak louder than words, but in writing it is the reader’s interpretation that speaks louder than your words.” And this social-constructivist realization could only be meaningful in a community of writers and assessors that Kelly comes to trust. She explains in her final reflection:

My biggest challenge this semester was my preconceived notion that I was walking into this class with a “green thumb” and that I already knew how to write effectively . . . This made me immediately defensive and unreceptive to the suggestions and criticism of my peers when they evaluated my work. What I had to come to realize was that I was writing for them, and that their engagement into my papers determined my effectiveness. So I had to swallow my pride and digest some criticism and I am not ashamed to admit that I am a better writer because of my peers.

Kelly’s assessments of her work helped her to gain some new insights into writing and audience. It was uncomfortable for her. She had to swallow some pride, but

5 I’m thinking in terms of the shared origin of the words “community” and “communicate,” which in Latin is commun-i (common). The OED parses the term: com (together) and munis (bound, under obligation). I’m implying that authority and empowerment in individual writers comes from a group’s sense of being bound together in a mutual struggle with and within texts and contexts, meaning and the conventions that constrain and overdetermine meaning.
she’s “a better writer” because she “came to realize” that her peers had “criticism” she should “digest.” Sarah, another student in the same class, approaches the value of community assessments from a different but equally productive angle:

... when there is a group evaluation, it helps make the critique more valid, because it isn’t just one person’s feeling, but a group ... I like the group evaluations in the class. On my last position paper, having the class all agree on an idea to help expand my paper, made me think, and by giving me the idea, it also helped me understand what they were talking about.

While Kelly takes a pragmatic approach (she’s writing to her colleagues in class, so she’d better take their assessments of her work seriously), Sarah uses an analytical approach (her colleagues assessments agree in certain ways, so those judgments on her writing must be more valid through their apparent reliability). Both approaches center on trust in a tangible community that has an immediate, practical function. The voices acting on writers and their texts are active in helping each other write better papers because they assess according to community-defined criteria and in a context in which everyone is both assessing and receiving assessments. They are mutual acts of assessments, a giving and getting. When I also consider where each student started and left the class, I see two writers who became empowered by their assessment practices and reflections, and allowed others to do the same around them. I also hear active voices in groups, in our conferences, and in their assessments and evaluations of their colleagues’ work.

The sharing of writing and assessing also allows some to find help on the job, in their other courses, in their thinking about issues others write about, in their educational journeys, and with friendships and citizenship status. In a late-semester weekly reflection, Krystal offered the class this:

Throughout the semester, I have become less stressed out with the class and more excited to go to class and hear what people had to say or argue. I realize that I am not one who always speaks up in class or states my opinion, but I do have an opinion ... I enjoyed the fact that I could just sit back and take in what others had to say and not be graded on this participation, or lack there of.

I feel, though, that I have taken a lot from this class. I have realized that how and what you write about really can affect people, both positive and negative. Sometimes what someone would write would inspire me to do more in the world, or to love myself more for who I am rather than wishing I had a better body [two position papers from the class]. Those subjects impacted me very much. I also feel that I have become more of a developed writer; that I look harder at what I am writing as well as reading, and take in other’s perspectives with more willingness. All in all, I feel that this was a good course for me, that it helped me develop not only as a writer and reader, but also as a person, a friend, and a student.

Krystal finds personal value and meaning in her colleagues’ writing, in the class discussions (mostly without me), in the course structures that gave her opportuni-
ties to speak her mind, remain silent, engage in assessments. Notice I am absent in this picture of our class. She is central, and her peers are integral to her learning. Krystal highlights what most do at some point in our discussions, conferences, reflections, or course evaluations: that when the class is successful, it is so because the students not only become active learners in their writing and assessment processes, but they begin to see how better writing and thinking has more to do with their own assessment practices than mine.

What the student assessments and reflections in this section illustrate, I hope, is that allowing our students to assess themselves for real is pedagogically sound. If our purpose for assessing and evaluating student writing is to help students learn — if assessment is inherently a learning practice (which I think it is) — then the teacher shouldn’t control all of the process. Assessing for our students only hamstrings their progress by making pronouncements on their writing, halting reflection and self-assessment — it keeps them from doing the very things we want them to be able to do: assess and understand language, write and understand writing, conceptualize hermeneutical acts. A rubric that continually evolves pushes students to rethink assumptions about rhetorical conventions. Assessment practices that are reflective and publicly discussed can make reflective, more self-conscious writers, as well as an active, pragmatic, responsive community. Fourth generation evaluation focuses our attention on assessing writing in a real and tangible community and by its members who find mutual respect for one another because of their common endeavors.

When asked on the last day of class what element of the course I should keep for future courses, the anonymously written responses each time are similar in nature and content, for example, “peer evaluation,” “position papers,” “community,” “open discussions,” “atmosphere of the class,” “process of the position papers/assessment/essay,” and “peer review and evaluations of papers.” One anonymous student identified, as most do, the “ability to evaluate my own writing.” Michael from a more recent semester ends the course with this reflection in which he mixes his revision, self-assessment, and colleague assessment processes together: “Even though it was difficult at times, I learned and practiced self analysis, and the feedback I got from others was invaluable to reshaping my writing on these individual papers. The evaluation of papers and the going back over the same work time and time again has helped me see my own writing in a different perspective.” That different perspective for Michael comes from the various angles assessment provides. It wasn’t just him “going back over” his work, but also his peers. And the “going over” involved assessment, revision, periodic reflection, and discussion on all his activities with his peers and not a teacher. This is a fuller, richer position.
from which he can learn to write and assess writing, and it tells me things are working in my class.

While most of my end of semester student evaluations and comments on my pedagogy have been quite positive and encouraging, there are some mixed results. Some students still leave much the way they came in: overly concerned about grades, dogmatic about what makes good writing, confused about why I didn’t assess them (a couple, even a bit upset), and feeling generally dissatisfied with the “quality” of their papers due to only peer feedback on them (no “expert” assessments). Usually, however, even the negative experiences, like the explicitly positive ones, tend to be mixed in sentiments. The tension is often around their final grade. Jennifer is typical:

I think I struggled with this [the absence of a teacher as an evaluator] a lot during the class and it was hard when I got my final grade because I know that I’ve learned a lot even without the documentation of it. A lot of the grade was my fault though, so I’m trying to be content with it; again it’s just hard when you know you’ve learned a lot.

Jennifer sees a discrepancy between what she “got” as a grade in the class and what she knows she’s learned. This may be part of the “false motivation” and “false sense of worth” described by O’Hagan (1997) and Kirschenbaum separately — grades are deceptive. But even in this final reflection, Jennifer takes responsibility (maybe for the first time, she was in her first year of college), shows a level of active learning, assesses her own progress, the pressure of grades, and their effects on her attitude toward the class. She acknowledges that “a lot of the grade was my fault” and hints that she continues to look for contentment in what she’s learned (ongoing reflection), and not in the inadequate ways in which our institution forces us to measure her performance. And maybe mostly, she seems to be finding a way both to see what she’s learned and understand the pain and confusion that grades present oftentimes. But getting the most out of a class is not always “fun,” nor does it always leave us with “good feelings” about everything. And my sense is that Jennifer wants that grade to reflect her character, not her portfolio as a situated product whose evaluations were negotiated by her and me. The “documentation” she speaks of was the drafts necessary to show how each portfolio document moved in revision — they weren’t there. And so she simply couldn’t talk much in her reflection letter about rhetorical decisions, revision choices, or peer assessments she pondered. And because many of her included drafts were only slightly different from those she submitted for class discussion and assessments, it’s hard to see what she learned exactly. No doubt she has, but, as she says, she hasn’t documented it for us. This has been the most difficult aspect of this pedagogy for me to bear because I want Jennifer to see the real potential in her education, listen to her peers and judge for herself. Become more critical about language and her own hermeneutical acts, feel good about her learning, and not focus on collecting certain letters for her transcript. However, she will have to come to these conclusions on her own, if she’s willing to.
Many also complain about the intense focus on peer assessments and class-constructed rubrics. They say the teacher should be the center of knowledge about writing, and the creator of rubrics. This is logical, really. Teachers know more about writing — that’s why they’re “teaching” the class. While I do not disagree with this logic, it is the application to a classroom, the learning processes of students that I question. If I know how to teach writing best, why not trust me? More importantly, as has been shown over and over, writing isn’t something directly deliverable as a “skill.” It’s a complex practice. We don’t learn how to write successfully by someone else telling us how to do it. We learn by practicing, thinking about our practices, and re-formulating practice. For some, the rubric even seems too context specific, too constructed by our class, and thus won’t help many in future writing endeavors. Catarina voices this tension early in a recent semester. After explaining that she liked having the class create the rubric but she wondered: “How do we know this will help us beyond this class? Making personal rubrics may be fine for this semester, but when we go back to the traditional class environment, what will we have gained?” Yes, what will she have gained? A great question. And just asking it suggests a gain already, one concerning an active learning stance and an awareness of shifting and contested rhetorical conventions. But it is the process itself — the finding of answers — that matters most, not a list of universal writing guidelines for all occasions. My hope is that our rubric processes allow students to see these questions as important to ask, ask them of all their educational contexts, maybe force them to, and find useful ways to address them in each context. At another level, what Catarina and her classmates have gained is quite tangible. They’ve learned that writing conventions are contextual and communally developed; that they often evolve over time; that individuals’ hermeneutical acts (the judging from them) often lead to contradictory results; that judging writing is not a cut-and-dry act, done in a vacuum, but one mediated by many factors (e.g., the purpose of the assessment, the rhetorical context and exigencies, the community from which the writing takes place, the purpose of the writing, etc.).

These resistances and complaints that always occur in some form, highlight the simple fact that many problems within my class stem from the realities outside of it. Our class, as democratic as it is, doesn’t change the fact that my students’ writing outside of class may still seem like a game of chance, regardless of the motives of their teachers or the soundness of their grading practices. Their experiences with grades given to them by teachers with fuzzy grading criteria, or mysterious hermeneutical practices, have trained them to see the problems with teacher-centered assessment, but have not offered them any strategies to cope with these problems. Additionally, they know that they still need to leave my class with something, a grade, some skills as a writer, how to argue better than when they came to me, etc. Because my pedagogy seems so non-traditional, so radical, some can’t see what they’ve learned because it’s not packaged in the form they are used to.

But most do leave with a sense of improvement, and they voice it in many ways. In an end of semester reflection, Kim points out her development,
showing a stance of an active learner, and directs her comments to future students:

Instead of grades you will learn how to assess and evaluate your peers’ writing which in the end will give you more satisfaction with your writing skills. You will also be expected to validate your own writing. Asao gives you direction, but it is up to you to answer your own questions. This has been the most effective way in my learning process.

While she doesn’t offer much specificity, Kim does demonstrate a new confidence in her own abilities as a writer. Her portfolio and final conference with me attest to this. She was thorough and reflective. Her portfolio was thick, each draft containing layers of color-coded assessments by her peers and herself. She even annotated the assessments written on her drafts, describing the patterns she observed, and how she addressed each in the next draft. And Kim is not that atypical. A good one third of my students do similar kinds of heavy annotations and commentary on their written assessments and portfolio contents. These kinds of practices, reflections, and assessments, undirected or prompted by me, show an active engagement with the writing and assessment processes of the course that suggests my framework is doing its job.

But sometimes I wonder if drafts really get better, if writers learn to actually write better. While all of the drafts in Kim’s portfolio were responsive to her colleagues’ assessments, and showed her analyzing and synthesizing them in detail, several of her papers just didn’t move very far from first to last draft. In her first position paper, she looked at a reality TV show’s objectification of women and the common “selling of sex” trope in their advertisements. Her first draft simply gave a description of a magazine advertisement for the show and made this conclusion: “Why is this show called real T.V. when each person on the show is put in a surreal situation with seductive chords and heat lamps . . .” (her ellipsis). Kim’s final draft’s conclusion isn’t much different, although it is more coherent: “Ads focus on sex and sexual appeal to portray women objectively in society, even if it has nothing to do with the products that are being sold.” While more realized and clearer, her claim and argument haven’t really changed in depth. She doesn’t look at any details in any new or different light. She did listen to her peers, and her ideas became more concrete, less narrative-like, but she took little from our class discussions, which focused on the underlying issues around the images of women in the ad. Why does sex sell? Why is a show like “The Bachelor” popular? A man picking from a throng of eager women, doesn’t this seem chauvinistic? Yet most of the women in that class were eager to admit they watched the show religiously, including Kim. Gender stereotypes and unquestioned “American” values that subordinate women abound in the ad, but Kim made no mention of them. I wondered: Has she learned to look deeper into a text like this? Has her peers in class really helped her find these kinds of things in her text? Would she have done better if I had assessed her writing? Is the depth of the product (the paper) more important than the writer’s depth of understanding as a learner and assessor? Are these areas exclusive?
5. Assessment as “instructive” praxis

In a way I believe Huot is not thinking of explicitly (but not excluding), community-based assessment pedagogy does the work of what he calls “instructive evaluation.” In his chapter on assessing, grading, testing, and pedagogy, Huot’s description of instructive evaluation glosses well the assessment practices I’ve been describing:

Assessment as a way to teach and learn writing requires more than just feedback on writing in progress from a teacher or a peer group . . . [instructive evaluation] is tied to the act of learning a specific task while participating in a particular literacy event. Instructive evaluation involves the student in the process of evaluation, making her aware of what it is she is trying to create and how well her current draft matches the linguistic and rhetorical targets she has set for herself, targets that have come from her understanding of the context, audience, purpose and other rhetorical features of a specific piece of writing. Instructive evaluation requires that we involve the student in all phases of the assessment of her work . . .

Instructive evaluation demands that students and teachers connect the ability to assess with the necessity to revise, creating a motivation for revision that is often so difficult for students to obtain. . . . A classroom pedagogy that encourages and highlights the evaluative decisions of writers, teachers, and peer review groups can help foster a new, shared role for assessment and the teaching of writing. (2002a, pp. 69–70)

In a community-based assessment pedagogy, student writers are integrally involved in the assessment processes of their work — in fact, assessment is integrally their activity, not the teacher’s. Revision and assessment are married to public reflection, which allow students a formal chance to consider what they are attempting to communicate to each other, how they are doing it, how well they are meeting their rhetorical targets, and offer these insights to the class as a whole. In my pedagogy, these targets, encapsulated in our rubric, are ones derived from class dialogues and dialectic activities that use fourth generation evaluation techniques, i.e., to instigate students to continually theorize around writing and assessing in order for them to write and assess more self-consciously. And so, this pedagogy does something that Huot doesn’t list: it pushes students to articulate and theorize their assessment practices, which then informs their own writing and revision. The “new, shared role for assessment and the teaching of writing” that this pedagogy encourages is the role that theorizing plays in writing and assessment — that is, it offers students a new role to play, one that we teachers already play and benefit from, that of theorists of writing. Just as we do, our students should theorize their practices in order to ask better questions and find better practices. All of these characteristics are a function of the students’ stance as active learners, both as individual writers and (maybe most importantly) as a community of writers and decision makers bound together in mutual endeavors. Without this stance, it
would be difficult to act upon their rubrics, assessments, and ideas about writing and assessing.

Victor Villanueva Jr. voices what I’m encouraging through community-based assessment, using Paulo Freire’s account of critical consciousness:

Critical consciousness is the recognition that society contains social, political, and economic conditions which are at odds with the individual will to freedom. When that recognition is given voice, and a decision is made to do something about the contradiction between the individual and society’s workings against individual freedom, even if the action is no more than critical reflection, there is praxis. The way to arrive at critical consciousness is through generative themes. Generative themes are critical assessments of limit-situations, the myths that maintain the status quo. (1993, p. 54)

Critical consciousness explains the tension that most of my students feel at one time or another when I stay away from their texts and they get conflicting assessments from colleagues. They need outlets to express this tension — to assess critically their assessments. In fact, according to Villanueva’s summation of Freire’s account, “critical assessments” are the key to critical consciousness in the individual. They help form praxis. The “critical” part in this process, as I see it, is self-reflection made public on inherently reflective practices (that is, assessments), a praxis that allows the individual to confront and question the contradictions in her experience of our classroom conditions, of her writing, and display it for others’ benefit — this is how my students “give voice” to their critical awareness and “do something” about what they think and feel. When done in community, praxis can be focused on broader goals, ones that compare practices — not to rank student performance but to enrich and complicate them, to produce a sense of mutual endeavoring and common struggling, to improve writing. When reflected upon and discussed publicly, writing and meaning making become less about what is good for the individual and more about what’s good for the class. Yet these same reflective activities can also preserve individual resistance to discourse conventions set up by the class (our rubrics) by allowing spaces for dissonant voices and uncensored questions. In fact, this happens often in my classes, and I encourage it because it gives us a chance to talk about why we believe what we believe, about hegemony, the power of language and its conventions over us and our ways of knowing. It connects the self-as-writer to the self-as-stakeholder-in-community. It’s an attention to the “us” yet not forgetting the “me.”

To illustrate, Kim articulates how this process of critical awareness has worked for her in our classrooms community on a personal level and in context of her educational history with grades and writing. She reflects at the end of our course:

When I began your class I was upset at the fact that we were not getting grades or validations for the work we produced during the semester . . . I did not understand how we could be graded without getting a formal letter grade at the top of our papers with teacher’s comments. Now . . . it does not take a grade to validate one’s
writing because grades are subjective . . . I have the skills to assess and evaluate . . . without revealing to me all the answers, you have stood back to let me figure them out on my own, and for the first time in my life, without people giving me the answers, I have figured things out on my own.

To place Kim's conclusions in context, in her final reflective piece within her course portfolio (the one discussed earlier), she emphasized her understanding of self-assessment and writing for an audience as practices spawned from our daily assessment and response activities. We also had a number of conferences and email exchanges on her work. In all these discussions, I asked her questions, and attempted to coach her carefully toward her own ideas but refused to offer suggestions for her writing. What did she feel was important to tell the class (what tells her that this topic is important?), and how did she think she should explore it? Her own self-assessments, and those from her colleagues in class, were key for her because they gave her thinking to reflect upon.

Through her own practice and reflections, Kim was able to find validation for her writing and assessment processes, theorize her role in her education a bit, and find good answers for her questions. Keeping my hands and words offer of her texts was crucial to Kim's growth. David Bleich says that grading has "ideological functions," ones that work to perpetuate "conditions favorable to the few who govern society" (Allison et al., 1997, p. 22). This seems clear in Kim's case. In effect, past teacher comments have constructed a hegemonic discourse around her writing, which is part of the reason Kim has had a hard time finding value in her writing and self-assessments. Teachers have dominated her texts through their evaluations, which in the end silenced her (what Paul Bové, quoted by Bartholomae, calls "regimes of truth" (Bartholomae, 1996, p. 16). In fact, Bleich says that "[g]rading and testing [which are usually administered by teachers] have an ideological authority. Testing and grading have such great inertia in society because they are the pedagogical means by which an unfairly structured society is perpetuated" (his emphasis, Allison et al., 1997, p. 28). Almost ten years later in Grading in the Post-Process Classroom, and attempting to deflect the ideological authority grades have on students, William Dolphin proposes to make "the subject of grades . . . the initial topic of inquiry [in the writing classroom], with the goal of arriving at a consensus within the class on a collaboratively written grading policy" (Allison et al., 1997, pp. 115–116). Tim Peebles and Bill Hart-Davidson argue for a classroom practice that allows students to debate over their own grades in writing (through "grade arguments" written to the teacher), something to be included in their course portfolios and engaged throughout the semester. It's practices like these, when added to Huot's call for "real student involvement" in assessment, and the understanding that grading is an activity that does not have to be done unthinkingly, uncritically, or by the teacher alone, that reiterate how necessary students' roles are in classroom assessment.

What I hope to have shown here is how community-based assessment pedagogy can build more meaningful and productive writing practices, ones that use
class-constructed rubrics, assessment, and public reflection to encourage active, self-conscious, critical writers who can begin to theorize their practices. Additionally, it offers one way to foster meaningful and tangible class communities that support the mutual efforts in which students are involved. Community-based assessment pedagogy, as described here, boils down to these three classroom imperatives: (1) encourage active learning stances by allowing students to assess and evaluate their own and their colleagues’ writing practices, and make these assessments meaningful and purposeful, (2) situate assessment practices within a community of knowledge makers who construct assessment rubrics and define and justify assessment practices, i.e., encourage the class to work for one another as mutual agents working with and for each other’s benefit, writing for each other, and negotiating hard agreements together, and (3) give lots of opportunities to reflect on assessment that speaks to the larger class community, in order to theorize about writing, rhetorical conventions, assessment, and the judging of writing from specific criteria, i.e., what we say about what we are doing (or did) can help us do it better in the future. In my versions of this pedagogy, these imperatives rest on a framework of recursive, repeated writing and assessment activities.

Finally, these three imperatives offer what Bell Hooks contemplates in *Teaching to Transgress*: “an education as the practice of freedom” and not “education that merely strives to reinforce domination” (Hooks, 1994, p. 4). She says, “I think that a feeling of community creates a sense that there is shared commitment and a common good that binds us” (p. 40). Her language echoes how I’ve attempted to think about community and the stances students need to take in the classroom. It is a sense that we are all in this thing together, “bound” to one another in mutual endeavors, helping each other to learn, create, and understand. While total class agreement isn’t necessary (or wanted) and while conflicting voices are encouraged and needed, the driving force to community-based assessment pedagogy is its ability to create rich, textured, and multi-voiced discussions that actually produce things for students: rubrics, assessment practices, revision along specific rhetorical dimensions, theory, and more reflective stances as writers. Invoking Freire, she explains that “education can be liberatory when everyone [in the classroom] claims knowledge as a field in which we all labor” (Hooks, 1994, p. 14). Hooks and I articulate a similar purpose: liberatory educational practices lead to learning and theorizing about the process and products of education so that students own knowledge, not to possess it, but to question it for more ethical future purposes.

There are still lots of questions unresolved and issues unaddressed, but I am encouraged by my results, so I continue. My classroom isn’t a place where anything goes, but one where, I believe, anything is possible. It’s a community that gains authority by exercising power at all levels, and takes control of the conventions used to write, assess, and evaluate, Then practices these things on itself. This takes some of the best elements of post-process, assessment, critical pedagogy, and portfolio theory to date and provides a crucial link between the writing assessments students must bear in other arenas and those they do on their own in my class. To practice a community-based assessment pedagogy is, as I’ve shown here, to teach writing,
assessment, and reflection as intertwined public acts, that must be discussed and scrutinized by students over and over, and that are necessary to giving them the most chances at developing as writers and critically aware citizens. And if this pedagogy is done right, students might actually theorize for themselves about their own writing and reading practices, assess themselves critically and purposefully, and come out of the process fundamentally changing the questions they ask when they write and read, form praxis — and wanting to do all these things because they find them intrinsically worthwhile to do.

References


Please don’t ever ask me to bet on which topics will be "hot" and which ones not. I managed to blog about an experiment in evaluation (y-a-w-n, so I thought!) during the week our new site was down several times for repair and then when I was off the grid, on my big one-week-of-vacation-fun of the year. Off the grid. I thought posting what is basically a revised version of a very successful course I taught last spring, "This Is Your Brain on the Internet" was a respectable place-holder during absence (www.hastac.org's and my own). I threw in some new ideas about experimenting with grading methods almost as an afterthought. About 5000 views and dozens of comments later, well, I get it now: Grading is a hot topic!

Here's why I think that is the case. I don't believe anyone really loves grading or that anyone believes that grading, as it is presently configured, is much more than an expedient (not a wonderful) form of measurement. It works since our community has determined it's our normal metric for measuring, certifying, and applying a quick-to-read-and-calculate
"summary" that represents a performance in a particular course. I believe we all know it is an imperfect instrument and, well, we settle because it's the system we've inherited and it's easier to just go along with it than to invent something entirely new, profoundly accurate, and true to our Platonic idea of what real assessment might be, especially since no such idealistic or permanent standard exists. The point of evaluations is the grounds and circumstances changes constantly so we settle for something that works well enough and that is legible to anyone who sees it. An "A" is universally recognized as the top grade, even though we all know one person's A can be much stingier than another's. Grades are a compromise in our pedagogical lives, which is one reason we're so proud when there are other external signs that we're getting it right--the student I think is best gets into a top grad school, wins a prize judged by someone else, and so forth. But we barely wax nostalgic about the amazing grading experience we had back in 2005! In fact, I've never been around the proverbial departmental water cooler with faculty reminiscing about their best ever grading experience--although I've been in several conversations about my colleagues' best ever teaching experience.. Good teachers love to talk about the "aha" moments of teaching: The lightbulb that finally went on for a student who worked so hard to grasp a concept. A great conversation after class. A brilliant insight offered by that shy gal in the last row. An inspired lecture on the Panic of 1873 delivered the October 2008 day after the announcement that all the world's financial systems were overextended and about to collapse. A seminar that felt like magic every day. Yes, we all wax eloquent about those experiences and their pedagogical opposite. I have never once, in my entire career, heard anyone, young or old or in between, croon about the elegant perfection of assigning a grade. "I knew it had to be a B, and I just nailed it!"

Grades are a compromise to the practical. And they are a compromise. We all know that in our hearts and wrestle with it at the end of each semester. "Is this an A-- or a B++?" Really now.

I believe every dedicated, experienced, concerned teacher has at least
one grading story to report that still is a source of concern long after (I'm changing details here but all are based on actual incidents and you can all fill in your painful anecdote here: the brilliant, passionate, on-fire student who was dumped by his girlfriend the week before the final and didn't tell you until five years later that that's why he never turned in the final paper. A+ mind, no final paper, mysterious and disturbing silence. Why? The intrusion of a broken heart, physical exhaustion, depression, an illness not diagnosed until later, a death in the family: How do you calculate the average of life's pains?

Or another example: the student who was stunning in class participation and couldn't take a timed test to save her life? Now, we make provisions for this; ten years ago, that would have been, what, a D? Maybe a C if you're a pushover? Maybe you find out later that she carefully planned her college years taking courses without timed exams but she took your course because she heard it was the kind of class students remember twenty years later. She understood it, she contributed, she messed up on the tests. Give that a D+?

Probably not in 2009. The point is that we know a grade is an artificial marker of a certain kind of performance under a certain set of circumstances. Our understanding of learning disabilities, for example, and our attention to them has changed so radically in the last generation that students who would have been "failures" in 1980 even, because of their test-taking shortcomings, now are required, by universities and by Federal Disabilities laws, to be given tests that adequately test their particular kind of intelligence. Bravo, I say! But such a provision already acknowledges that evaluation is a metric that, like all metrics, must be, well, evaluated. Standards of measurement are invented; they do not exist in some universal, unchanging way. We've become obsessed, as a culture, with assessment. Is that the same as being obsessed with the highest standards of excellence? Is excellence the same in all situations? I don't think so. You measure success in a basketball game differently than you measure success at a symphony. There is no one right way for every circumstance, nor is there, in teaching, for every
individual, for every course, for every discipline, for every prof or every student.

We also know that we, as teachers, fudge our evaluation of evaluations all the time. We do not live in a perfect world and the drastic underfunding of teaching in the last decades has forced many a prof to make compromises that are anything but fair, respectable, or even defensible. You want decent evaluation? Then make sure your taxes (or your charitable contributions) go to supporting education in the way it should be supported. Compromise your educational system and you will get profs who are forced to compromise, and evaluation, sadly, is one of many areas where such compromise happens. Am I giving away state secrets when I suggest that there are some profs out there who, faced with 300 students in a course, with no TA or maybe only one or two, end up giving multiple choice or short-answer exams including in subjects where they would admit such exams are a travesty. "Ahab was trying to kill the White Whale because (a) he was a monomaniac (b) the White Whale represented his unfulfilled quest for life (c) . . ." Give it a rest. If I'm pouring out my soul teaching the most conflicted, anguished, soul-wracked writer in America, do I really think answering (a) and not (b) makes my students deserve an A and not B in my Melville course? I don't think so.

Because I'm writing a book now on cognition and digitality, I have spent a lot of the last decade reading books and articles (probably not just dozens but hundreds) on assessment, evaluation, and grading. I didn't really understand, until my "How To Crowdsourse Grading" blog, that others might be as interested in this topic as I am. It is quite clear to me that assessment in the forms now used in K-12 and in colleges and universities too is very much a product of the Machine Age. Historians of grading bicker about whether grading as a practice came about in the late 18th century at Cambridge or really in the mid-nineteenth century, but just about everyone concurs that just about the time that Taylor was taking out his stopwatch to measure how long it took for a worker to fill a wheel barrow, move it, dump it out again, there were others (like Galton)
who were figuring out how to measure brain productivity. Galton invented and/or perfected (this too has different scholarly adherents) many of the quantitative measures (such as regression toward the mean) that students still learn in Statistics 101. Galton, of course, was Darwin’s cousin. He misrepresented his famous relative's evolutionary conclusions, applying a eugenics twist to his "scientific measurement" of brain power. He had lots of ways for evaluating intellect, criminality, sexual tendencies, and so forth but we now tend to discredit head-bumps, fingerprints, and photographic imaging as scientific evidence of deviance or deficiency . . . but we still rely on some of his other metrics, including achievement tests and linear regressions.

We also still rely on the educational performance tests that Binet developed for the French educational ministry and that, in American hands, were transformed into tests of one’s Intelligence Quotient. Binet protested vehemently at what he saw as a misapplication of a diagnostic assessment of performance to a measure of innate and unchanging abilities but, never mind, the IQ test was administered, with the willing cooperation of the U.S. government and military, to over a million men who wanted to be soldiers in World War I. The test determined who would be an officer and who lacked even the brain power to be a foot soldier, canon fodder in the bloodiest of wars. Guess what? We now know that officers were gentlemen, i.e. that IQ tests results given to WWI soldiers correlated with social class, education levels, affluence, linguistic abilities, acculturation (for immigrant groups), and not, as was thought in 1917, with one's inherent ethnic "traits."

Oh, I could go on. Suffice it to say that I'm blogging rapidly, from memory, but the basic point is that evaluation is vexed and ever-changing and often misapplied. We're constantly going back and revising the test and then coming up with a different final score. Those holier-than-thou who love to believe standards are objective and that anyone who would "experiment" is really getting out of work or soft in the head or a "relativist" or some other sin are, I believe, being disingenuous. Push just about anyone and they can come up with an anecdote of a standard that
didn't work, was unjust, needed improvement, or was so unfair it needed to be tossed out altogether so we could start all over again.

That is how I feel about assigning grades in a conventional way (whatever that means!) in a class exploring new modes of cognition and digitality. The point of this course is to rethink our model of mind that has been handed down to us from the Machine Age and has about all the subtlety of that age. Which is to say not very much subtlety at all, certainly nothing at all like the complexity of the human mind. We are now at one of the great, transitional, transformative ages in human history when human behaviors are turning out to be quite different from what we would have said even five or ten or twenty years ago they were. No one would have believed "human nature" (remember Rational Choice theory?) would have ever, under any circumstances allowed for successful (in fact "winning" and "excellent") global collaboration among unanonymouse and unpaid self-appointed team members working together toward some goal, without a leader, without predetermined rules and severe penalties for violating those rules. But Linux exists. So does Wikipedia. On the level of pleasure, so do intricate and successful raids in World of Warcraft. On and on. if we have new evidence of human social and intellectual behaviors, new evidence that people actually like to learn and teach and share together, we need more subtle and interesting ways of assessing how individuals and groups work collectively. Digital thinking is a mode of thinking together, on line, through a process of peer evaluation and peer contribution, using a form of "participatory learning" that blurs the lines between work and play, intellectual and social life. It's a fascinating phenomenon when considered in historical terms and especially when viewed against theories of what is "humanly possible" as promulgated in the Machine Age.

"Nature red in tooth and claw" is a different conceptual operating system than the "wisdom of crowds."
That's what "This Is Your Brain on the Internet" is about. I loved teaching the class last spring to an astonishing and wonderful group of Duke's ISIS students (ISIS stands for Information Science + Information Studies). These students tend to major in wide-ranging subjects like Computer Science and French, or Engineering and Music, or Philosophy, Biological Anthropology, and English. They deserve a prof who is as thoughtful and demanding and introspective about learning as they are. Toffler's idea of "learning, unlearning, and relearning" is what this particular course promises and demands.

So, we'll see how this little experiment works. The point of an experiment is to try it and, if it doesn't work, then you try something else. The point of an experiment in our crowdsourcing, interactive age is you can try it along with the students and you can make adjustments along the way if it isn't working.

Successful collaboration cannot work unless all the team members are able to judge excellence, communicate judgment in a constructive and persuasive way, and then act on that judgment. Assigning a grade based on a pre-existing scale is very different than real-world negotiations which lead to a successful final product, whatever that product may be. Since the whole structure of "This Is Your Brain on the Internet" is working toward collaboration, the course is structured around a range of experiences that stress, demonstrate, and epitomize collaboration. Last year, we had a field trip, for example, to first a rehearsal for Shin Wei's dance performance (he choreographed the opening ceremony of the Beijing Olympics and was an artist-in-residence at Duke last year; he both directs and relies on the improvisation of his dancers) and then to a performance and discussion of that performance. We also had a Level 80 WoW gamer talk about his experiences in the game while others put that experience into a historical and theoretical context. Did every group project succeed? Not at all. The range was incredibly varied, with some near-perfect projects and then some that were mediocre. Later, some students in one of the groups afterwards complained privately that some of their teammates had failed them. I regretted that they came to me
after the result and began to think, back then, of how to make evaluation, feedback, standards, assessment, communication of difference, and engaged critique a structural part of this course. These too are what Howard Gardner and Howard Rheingold call "twenty-first century literacies," skills necessary for excellence in our digital age. Like all skills these need to be honed. And practiced. Not just graded.

So next year, as the first assignment in "This Is Your Brain on the Internet," students will be reading about evaluation and grading, including my blogs and the articles and the comments that all came rolling in while I was off the grid last week. Some of the comments are so thoughtful, collaborative, and evaluative. Some are positive, some negative, but still productive. Others are just crochety, cynical, and intellectually dull if not mindless. But I don't have to be the judge. We'll put together a portfolio of comments and students will be able to start off evaluating "evaluations" of these blogs and essays on evaluation. It's a perfect way to begin a class, since it already shows the positive and negative ways that people use the openness of communication online to contribute or just to rant. Both. Maybe I should even ask them to assign letter grades, A or F. No curved grades, please. (That, in case it is lost on screen, is a joke . . . but it's enticing.)

Evaluating evaluation is going to be an integral part of "This Is Your Brain on the Internet." What an experience! I can't wait. And, as I've said, I promise to report on what happens. Stay tuned!