

Life and difference, text and context

Spring 2017

Graduate Consortium of Women's Studies

I. Quick access to key information and links to bookmark on your browser

Including links to

- II. Information to get started, orient yourself at the start of the course, and refer back to from time to time.
- III. Contract: Course requirements and assessment.
- IV. Schedule of classes (This section starts with links to specific sessions).
- V. Bibliography (with links to pdfs)
- VI. Notes on class routines and assignments

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| Instructors | Mary Baine Campbell, English, Comparative Literature, Women & Gender Studies, Brandeis University, campbell@brandeis.edu Office hours TBA and Peter Taylor, UMass Boston Programs in <u>Critical & Creative Thinking Program</u> , <u>Public Policy</u> , and <u>Science in a Changing World</u> , peter.taylor@umb.edu , Office hours before class, place TBA, by signup: http://ptaylor.wikispaces.umb.edu/PTOfficeHours |
| Class time & location | Weds 5-8pm, 2/1-5/8, MIT, Place TBA <ul style="list-style-type: none">▪ Spring break varies among campuses so access-from-a-distance to certain classes will be possible. Arrangements may be made for snow day meetings on google hangout (set-up instructions) |
| Glitches | in online materials — report using this form |
| Blog/ Website | https://gcws17.wordpress.com BOOKMARK THIS! <ul style="list-style-type: none">▪ Access this syllabus and links (on top and on top right) to key pages, including session by session instructions, PBL projects, readings, instruction on assignments and participation items, and examples of work produced by previous students.▪ Post reflections on the course process, annotated bibliography entries, visual aids for presentations, draft and revised products from projects, peer comments, and whatever else seems appropriate to share.▪ Access to Bibliographies, Evaluations and other materials from past offerings of a related course. |

II. Information to get started, orient yourself, and refer back to from time to time

Description

In this course you will develop your abilities to expose ways that scientific knowledge has been shaped in contexts that are gendered, racialized, economically exploitative, and hetero-normative. The class will be structured through four projects that concern:

1. interpretation of cultural dimensions of science;
2. climate change futures;
3. genomic citizenry; and
4. students' plans for ongoing practice.

The projects will also draw attention to topics such as museum display, science fiction, internet-mediated discourse, and will involve close reading and literary analysis of texts, whether in science, social studies of science, or science fiction.

The projects will be undertaken in a Project-Based Learning format that allows students to shape their own directions of inquiry, skill development, and collegial support. Students' learning will be guided by individualized bibliographies co-constructed with the instructors, the inquiries of the other students, and a set of tools and processes for literary analysis, inquiry, reflection, and support. By the end of the class, you will have 1) charted a path into an ever-growing body of work on the interpretation of sciences in contexts, to which feminist, anti-racist, and other critical analysts and activists have made significant contributions, and 2) formulated a personal plan for ongoing inquiry that troubles the boundaries of knowledge production in the academy and sciences. Students from all fields and levels of preparation are encouraged to join the course; advanced study in the sciences or literary analysis is not required.

Elaboration

We are familiar with there being fields of art and literary criticism, but, despite the importance of science and technology in society, "science criticism" is not a widely accepted enterprise. With the goal of promoting a wider range of engagements in science and technology, this course stimulates interdisciplinary inquiry, pedagogical, conceptual and practical innovation, and epistemological self-consciousness through Problem-Based Learning (PBL) projects that put into play a variety of resources. These resources might include: the diverse interests, skills, commitments, and passions of the instructors and the students; annotated bibliographies, syllabi, and review essays—especially material contributed by feminist, anti-racist, and other critical analysts of science and technology; the rich personal and intellectual connections made easier in this internet age; the instructors' experience in stretching students and themselves

beyond disciplinary and conceptual boundaries; and a variety of course routines (see below) and related tools and processes.

PBL is an approach that allows you to shape your own directions of inquiry and develop your skills as investigators and prospective teachers. At the same time the PBL projects engage your critical faculties as you learn to contextualize science, especially as they address or suppress gender and racial difference, and especially as can be discerned by reading and analysis of texts, whether in science, social studies of science, or science fiction. The projects address different areas of life and environmental sciences but are sequenced so as to first lead us into the interpretation of the cultural dimensions of science. Building on that, we contrast the imaginaries of fiction writers with those of scientists and science-emphasizing commentators and then address, not suppress, the complexity of promises, fears, and claims being made about science in this evolving digital era. In the final course project you develop a personal plan to foster the development of others in their learning on some of the issues raised in this course and practice some of what you plan. This is an opportunity for you to develop your own projects for teaching, prepare grant proposals for further inquiry or activist engagement, or construct syllabi around topics in feminist and critical studies of science and technology.

Throughout the semester we navigate between, on one side, **divergent, reticulating explorations** of the implications that each of us sees in the project descriptions and, on the other side, a **disciplining of these explorations** so as to report on a specific product by the end of each project. To that end you have to address the bodies of substantive knowledge most relevant to your individual inquiries (guided by review essays in anthologies/handbooks, original scientific literature and informants identified by the instructors) and to translate that knowledge into terms digestible by others with different levels of expertise around diverse (sometimes divergent) bodies of knowledge. You also navigate between generating a **product** for each project and practicing **processes** of close reading, reflection, dialogue, and articulation of identities. These different aspects of the course experience are animated by the challenging question: how does one prepare for ongoing inquiry that troubles the boundaries of knowledge production in the academy and sciences? This question is an obvious one for interdisciplinary work, but it also applies in any area of specialization that wants to stay relevant as the wider social context changes.

To prepare yourself to take up this challenge, the course provides an opportunity to re-engage with yourself as an **avid learner and inquirer**. What makes this re-engagement possible is the combination of the PBL approach and the self-conscious attention to troubling boundaries, which involve:

- the **tools and processes** used for close reading of texts, inquiry, dialogue, reflection, and collaboration;
- the **connections** we make among the diverse participants who bring diverse interests, skills, knowledge, experience, and aspirations to the course; and
- our **contributions to the topics** laid out in the scenarios from which each problem-based learning (PBL) project begins (included in boxes in the class schedule).

Reflection on this re-engagement feeds into the plan for your own ongoing learning so as to be able to trouble the boundaries of knowledge production in the academy and sciences, which is required as part of the final project.

Class routines

The PBL approach taken in this course makes the schedule of classes look incomplete—it doesn't meet conventional expectations of weekly topics, readings, and pre-defined assignments. Browsing the course booklet or the links on the blog will give some feel for what might lie ahead, and students can view [evaluations](#) and other materials from a previous PBL science-related course for GCWS. But the essence of the course is that we make the road as we travel. Expect this offering, this workshop-style collaboration of students, to result in a unique construction. This said, there is a definite set of routines that make up the class sessions and other learning interactions in the course—blog, check-in, focal reading [one/week], workshop, presentations, annotations, dialogue around written work, peer commentary, private learning journal (for details, see Notes on class routines and assignments [section VI]).

Instructors

Mary Baine Campbell, in English, Comparative Literature and Women's and Gender Studies at Brandeis University, brings to the course experience designing two team-taught seminars for GCWS, as well as long-term scholarly engagement with the literary and colonial pre-history of the modern sciences, social and "natural," and experience teaching graduate seminars aimed at analysis and critique of knowledge and the texts that encode it. I have a long-standing interest in climate change and ecology, and share the interest of most feminists in the imaginary of the body. In graduate courses I aim to help students become self-aware skeptics of authoritative narratives our graduate education itself inclines us to honor rather than question: the narratives of the biological sciences have been the most authoritative in our society for decades.

Peter Taylor Science in a Changing World graduate track, University of Massachusetts Boston, brings to this proposed course a) the experience of teaching a PBL-format GCWS course on gender, race, and science four times with 3 different co-instructors; b) openness to learning from the literary interpretive expertise of his co-instructor; and c) a desire to bring front and center the challenge for students of developing a narrative or plan for themselves as inquirers who trouble the boundaries of knowledge production in the academy and sciences and cultivate the support needed to continue to do so.

Key Texts

Recommended as a source for the process side of the course:

Taylor, P., J. Szeiter (2012) *Taking Yourself Seriously: Processes of Research and*

Engagement. Arlington: The Pumping Station (pdf from <http://thepumpingstation.org/books> or as paperback from other online booksellers)

ACCOMMODATIONS: Sections 504 and the Americans with Disabilities Act of 1990 offer guidelines for curriculum modifications and adaptations for students with documented disabilities. The student must present any adaptation recommendations to the professors within a reasonable period, preferably by the end of the Drop/Add period.

Students are advised to retain a copy of this syllabus in personal files for use when applying for certification, licensure, or transfer credit.

This syllabus is subject to change, but workload expectations will not be increased after the semester starts. (Version 16 June 16)

III. Contract: Course requirements and assessment

Requirements

Overview

A sequence of written assignments (each at least 800 words) and presentations on the PBL projects.

Participation requirements include active participation based on preparation and PBL inquiry between classes, interaction between classes through the blog, office hour conferences with instructors on your assignments and projects, commenting on each other's drafts at least 3 times, making weekly reflections on your experience of the process in a private learning journal, and adding an annotated reference to the evolving bibliography on the blog at least 8 times.

It is expected that you will spend several hours per week outside class time reading, researching, reflecting, and writing. The course works by building from one project to the next so not being prepared or late submissions detract significantly from the learning possible in class sessions.

Grading

An unconventional assessment system complements the innovative pedagogy. The written assignments are commented on but not graded. The assignment is recorded as completed after you revise thoughtfully and resubmit in response to comments received on the initial submission from your peers and one or both instructors. (Revision entails some "re-envisioning," not copy-editing or superficial changes.) You keep track of your submissions and revisions on your own copy of the [assignment checklist](#). This system keeps the focus on interaction around written work and the presentations that emerge from participation in the unfolding dynamics of the course. The assessment system also accommodates the contingencies of your lives by allowing a fraction of assignments to be skipped without penalty. If you complete 80% of the written assignments and presentations (=9 of 12) and 80% of participation items (=30 of 37) you get an automatic B+ and the scoring [Rubric below](#) is used to assign B+, A- or A. If you miss that target—but we hope you don't—6 points are assigned for each assignment submitted and revised in response to comments (or 3 points if revision is missing or superficial), and 6 points for each presentation made, up to 48 points max; 1 point each participation item completed up to 32 max. Minimum points for each letter grade: A, 95; A-, 90; B+, 80; B, 72.5; B-, 65; C+, 57.5; C, 50.

Written assignments and presentations (3/5 of grade): One each on each PBL project. Additional details are provided with each PBL project and in the Notes on assignments.

Participation and contribution to the class process (2/5 of grade): Additional details are provided in the Notes on assignments.

- a. Attendance and Participation in class meetings based on Preparation between classes, including focal reading (=14 items)
- b. Syllabus "Treasure Hunt", to get familiar with organization of course materials and requirements

- c. Annotated reference or resource (=person, organization...) added (regularly, not all in a clump) to the evolving bibliography on the blog (=8 items)
 - d. Reflection on your experience of the course process and your learning in the PBL format (at least 10 weekly entries = 5 items)
 - e. Minimum of two in-person or phone conferences on your assignments and projects—one before session 5, the other, with the other instructor before session 10 (= 2 items)
 - f. Exercises to prepare for class workshops (for sessions 2, 8 & TBA; 4 items)
 - g. Peer commentary on other students' draft products (3 times, by the session after presentations; 3 items)
 - h. Your assignment Checklist filled-in during semester and submitted with self-assessment on the rubric at the last session (1 item).
- Bonus item: Participate in April session at the Cambridge Science Festival (subject to confirmation: overlapping with the last part of class and taking place in the same classroom).

Rubric

The items in this scoring rubric represent the instructors' expectations of students—expectations that students should embrace without needing direction and supervision.

If you qualify for an automatic B+, you get 80 points and the rubric to follow is used at the end of the course to add points (to move above a B+). For each quality "fulfilled very well" you get 2 additional points. If you "did an OK job, but there was room for more development/attention," you get 1 point. If "to be honest, this was not fulfilled," you get 0 points. Submit your own self-assessment with the assignment checklist in the last class.

1. A sequence of assignments paced more or less as in syllabus (and revisions timely),
 2. often revised thoroughly and with new thinking in response to comments.
3. Projects innovative, well planned and carried out with considerable initiative, and
 4. indicate that you can extend tools and processes from the course to your specific situation so as to "trouble... the boundaries of knowledge production in the academy and sciences."
5. Written assignments and report on projects clear, well structured, and addressing the Project descriptions
 6. with supporting references and detail, and professionally presented.
7. Active, prepared participation and building class as learning community, including
 8. leading or participation in student-student activities and helpful peer comments on drafts and presentations,
 9. reflections on the course process and your learning in the PBL format, as recorded in your private learning journal, and
 10. well-annotated contributions to evolving bibliography.

IV. Schedule of classes

- [insert on course website links for easy navigation to individual classes] 2/1, 2/8, 2/15, 2/22, 3/1, 3/8, 3/15, 3/22*, 4/6, 4/13, 4/20, 4/27, 5/4, 5/11

* Students can join from a distance if they are out of town for Spring break, which varies from campus to campus.

Classes will generally begin with a warm-up and check-in, e.g., sharing of highlights of reflections and annotations added to the blog or a reflective activity, except weeks 1, 14, and weeks when there are presentations.

Pre-semester preparation

Haraway, D. and Goodeve, T. N. (2000). *How Like a Leaf*. New York: Routledge;

Atwood, M. (2009) *The Year of the Flood*. Toronto: McClelland & Stewart (to be confirmed);
and

Butler, O. (1987-89) *Xenogenesis* (at least the first volume). New York: Warner Books.

Class 1. Cultivating support for ongoing learning I

(The basic rhythm and experience of the course introduced by instructors and alums. Everyone begins to get to know each others' interests. Initiate the process of formulating a personal plan for ongoing inquiry that troubles the boundaries of knowledge production in the academy and sciences.)

Spoken autobiographical narratives with Connections and Extensions responses, Reflections of alums, Introduction to Project-Based Learning and Class routines (blog, check-in, focal reading, workshop, presentations, annotations, dialogue around written work, peer commentary, private learning journal), Introduction to PBL project 1

Prompt for journal entry: After session 1 and before session 2: Reflect on the "connections and extensions" noted around each autobiographical narrative

Project 1 (classes 2-4)

What does it cost to establish knowledge in a certain place at certain time for a certain people?

(A project that leads us into the interpretation of the cultural dimensions of science)

In the late 1980s, the feminist historian of science, Donna Haraway, asked a question of this form in a playful community cable TV program interpreting the covers of National Geographic that feature primates (Paper Tiger 1987). Taking the video as an entry point to her interpretation of primate studies, this project asks you to consider the issues about interpretation below and, informed by that, to produce a mock-up of a museum display and text interpreting some aspect or selection you choose from Haraway's work in its 1980s context. (ICA 2015 might stimulate your thinking about museum displays, even though the displays are not about

science, while Haraway 1989a places museum displays about life science in a particular historical context.)

Issues about interpretation include: How does one link some aspect of science to some aspects of the social and cultural context? How does one acknowledge what the science or scientists literally say at the same time as claiming significance for one's interpretation of contextual influences that may or may not be explicit? How does the outside social context get inside the science—is this the right image of what is going on? Does interpretation follow the same or different rules of evidence and reasoning from scientific claims? Where do questions come from? Where do interpretative themes come from? How does one link some interpretation of science to some aspects of the social and cultural context?

What does it cost to advance a scientific account or an interpretation in a certain place at certain time for a certain people? Whose labors and craftwork gets appropriated? Whose voices and texts get silenced? Whose expertise is made into facts, machines, policy, medicines, topics of cultural and political discourse, science education, and so on? What people are discussed and treated according to the group they are members of? What exclusions do you detect in the space of representation; what or who becomes an object of representation rather than a subject of interpretation?

In what ways can we learn to teach/engage others to interpret the cultural dimensions of science?

(Note: Haraway's accounts of primate studies, as well as Octavia Butler's 1987-89 Xenogenesis, which enters project 3, might be seen as inspiration or precursors for the active field of animal studies, which is currently active in expanding the category of sentience, even citizenship, beyond the historically traumatic category of the "human.")

Sequence of steps and classes:

2. Generating questions for inquiry (KAQ framework [Knowledge-Action-Questions; Taylor and Szteiter 2012, 105-106]) & looking for answers in the texts [led by Taylor]

Focal reading: Haraway, D. "Teddy bear patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936," in *Primate Visions* (originally published in 1984/5 in *Social Text* 11: 20-64).

Prompt for journal entry (b/w session 2 & 3): TBA

3. 5-phase Dialogue process (aka Dialogue Hour) to share and clarify what we are inquiring into regarding the project (and Haraway's work).

Focal reading: Delaney, "Reading at Work"

Prompt for journal entry (b/w session 3 & 4): TBA

4. Presentations and submission of written product = a mock-up of a museum display and text interpreting some aspect or selection you choose from Haraway's work in its 1980s context.

Focal reading: Barthes, *Mythologies* (selection TBA)

Prompt for journal entry (b/w session 4 & 5): Digest comments on presentation

B/w 4 & 5. Comment on the written product of another student.

6. Resubmit your product, revised in response to comments from an instructor and a peer.

Materials:

Barthes, R. ([1957], 2009) *Mythologies*. London: Vintage.

Delaney, S. R. (1996) "Reading at Work, and Other Activities Frowned on by Authority: A reading of Donna Haraway's "Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980's," in Delaney, *Longer Views: Extended Essay*

Haraway, D. (1989) *Primate visions: Gender, Race, and Nature in the World of Modern Sciences*. New York: Routledge.

----- (1989a) "Teddy bear patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936," in *Primate Visions* (originally published in 1984/5 in *Social Text* 11: 20-64).

----- & Goodeve, T. N. (2000). *How Like a Leaf*. New York: Routledge.

ICA. (2015) Leap Before You Look: Black Mountain College 1933–1957

<https://www.youtube.com/watch?v=9URP8GgSg5M>

Paper Tiger TV (1987) Donna Haraway Reads "The National Geographic" on Primates, <http://papertiger.org/node/751>

Taylor, P. J., & Szteiter, J. (2012). *Taking Yourself Seriously: Processes of Research and Engagement*. Arlington, MA: The Pumping Station

Project 2 (classes 5-7)

Science and literature exploring life on the near-future earth

(A project in which we contrast the imaginaries of fiction writers with those of scientists and science-emphasizing commentators)

Peter's most-cited (and most-quickly written) 1992 article, "How do we know we have global environmental problems" (revised in 1997) is not denying climate change, but problematizing each term in the question. Who is the "we" that knows? How does the knowledge portray the problems as "global" and "environmental"? And so on. In this vein, the paper noted:

"Tightening long-term projections [of climate change] or highlighting their severity is not... the only means by which policy responses to climate change could be catalyzed. As political scientist Glantz (1989) has observed, extreme climate-related events, such as droughts, storms, and floods, already elicit socio-political responses that can be relatively easily studied. Recent and historical cases of climatic-related "natural hazards" shed light on the impact of different emergency plans, investment in infrastructure and its maintenance, and reconstruction schemes. Policymakers, from the local level up, can learn "by analogy" from experience and prepare for future crises. Glantz' approach is valuable whether or not these crises increase in frequency (or are already increasing in frequency) as a result of global climate change. Instead of emphasizing the investigation of physical processes and waiting for uncertainty to be eliminated before action is taken from the top, this approach calls for systematic analysis of effective versus vulnerable institutional arrangements. Such discussion of specific, local responses to climate change has been occurring. Nevertheless, the vast majority of funds for global change research is currently being devoted to improving GCMs and allied climatic studies..."

In calling for analysis of specific, local institutional responses, Glantz and then Peter did not, at that time, emphasize the possibilities—perhaps necessity—of constructing alternatives to the gendered, racialized, economically exploitative, and hetero-normative aspects of institutions. What is evident, 25 years later, is that climate change discourse, shaped by scientists and commentators such as Monbiot (2006), remains centered on how change is being forced on us by inexorable physical processes. However, novelists, such as Atwood (2009) and Butler (1994), seem to be more imaginative (and less positivist) about who could be involved in shaping life in future conditions, recreating traditions in order to have an ongoing world, making difference central to how something other than hell on earth has to be formed. Afrofuturism is a movement in the arts based on alternative axioms, including the relation of oppression to

climate change, and the perspective of radical change as hopeful for and even managed by peoples of color.

This project asks you to bring scientists and interpreters of literature into constructive conversation around responding to “crises [that] increase in frequency... as a result of... climate change.” You invent the form your product takes, such as a sequenced set of excerpts from novels annotated so as to guide scientists into reading and writing more critically, a guide for bringing literary analysis to bear on popular climate change books, an imagined future exchange—“So, white guy, what did you do in the climate change crises?” and so on.

Sequence of steps and classes:

5. Mapping of fictional text, Ballard (practice in multiple close readings [led by Campbell])

Focal readings: Taylor, P. J. “How do we know we have global environmental problems?”

J. G. Ballard, “Deep End” (short story)

Prompt for journal entry (b/w session 5 & 6): TBA

6. Work-in-progress presentations in small groups, each followed by extended discussion

Focal reading: TBA—Angela, “Super-natural futures” or excerpt from Butler (1994)

Prompt for journal entry (b/w session 6 & 7): TBA

7. Presentation and submission of written product that “bring scientists and interpreters of literature into constructive conversation around responding to “crises [that] increase in frequency... as a result of... climate change.”

Focal reading: TBA

Prompt for journal entry (b/w session 7 & 8): Digest comments on presentation

B/w 7 & 8. Comment on the written product of another student.

9. Resubmit your product, revised in response to comments from an instructor and a peer.

Materials:

Angela (2013). “Super-natural futures: One possible dialogue between Afrofuturism and the Anthropocene,” <https://mutablematter.wordpress.com/2013/08/13/super-natural-futures-one-possible-dialogue-between-afrofuturism-and-the-anthropocene/>

Arnason, E. (2010), *Mammoths of the Great Plains*. San Francisco: PM Press

Atwood, M. (2009) *The Year of the Flood*. Toronto: McClelland & Stewart.

Ballard, J. G. ([1961] 2006) “Deep end,” *The Complete Short Stories of J. G. Ballard: Volume 1*. NY: Harper

Barr, M. S. ed. (2008). *Afro-Future Females: Black Writers Chart Science Fiction's Newest New-Wave Trajectory*. Columbus: Ohio State University Press.

Butler, O. E. (1994). *Parable of the Sower*. New York: Quality Paperback Book Club.

Glantz, M. ed. (1989). *Societal Responses to Regional Climactic Change: Forecasting by Analogy*. Boulder, CO: Westview Press.

Monbiot, G. (2006) *Heat: How to Stop the Planet From Burning*. London: Allen Lane.

Taylor, P. J. (1997). How do we know we have global environmental problems? Undifferentiated science-politics and its potential reconstruction. In P. J. Taylor, S. E. Halfon & P. E. Edwards (Eds.), *Changing Life: Genomes, Ecologies, Bodies, Commodities* (pp. 149-174). Minneapolis: University of Minnesota Press.

Womack, Y. L. (2013). "Project Imagination," ch. 3 of *Afrofuturism: The World of Black Sci-fi and Fantasy Culture*. Chicago: Lawrence Hill Books.

Sun Ra, *Space is the Place* (documentary film)

Project 3 (classes 8-10)

Genomic citizens and misfits in a digital age

(A project in which we address, not suppress, the complexity of promises, fears, and claims being made about genetics in this evolving digital era.)

Since the advent of the Human Genome Project, there has been a proliferation of discourse (in scientific journals, the popular press, and in cultural productions) about genetics, the gene, the genome, genomics, epigenetics, biotechnology, gene-based personalized medicine, synthetic biology, and so on. Some of this discourse includes new or revived claims about race and gender. In the same period we have seen the rise of the internet and social media, with accompanying claims that, for example, “the Web... is challenging the bedrock concepts of our culture: space, time, matter, knowledge, morality, etc.” given that it resists the idea that knowledge should be “context-free and universal.” The Web provides “databases” of information and at the same time “reveal[s] what you weren’t expecting... a link we hadn’t seen, an unfolding we hadn’t anticipated... Making a decision means deciding which... “inputs” to value and how to fit them together to make a coherent story” (Weinberger 2002, *Small Pieces Loosely Joined*). At the same time, as internet skeptics, such as Evgeny Morozov (2011, *The Net Delusion*), remind us, there is a “dangerous fascination with solving previously intractable social problems with the help of technology [that] allows vested interests to disguise what essentially amounts to advertising for their commercial products in the language of freedom and liberation.”

Suppose we admit to lacking a coherent story of the promises, fears, and claims being made about genetics in this evolving digital era, especially as these developments shift our ideas and actions concerning race and gender. This project then asks you to contribute to a syllabus for a course that would better prepare someone like you to study and engage with these topics, so that, at some future time, you might have a coherent narrative and/or teach about these topics.

Let us imagine that the shared pre-semester reading is Octavia Butler’s 1987-89 *Xenogenesis* (aka Lilith’s Brood) trilogy, which tells a story about race, gender, sexuality, and difference in a future where genetics is manipulable and our human descendants are constructs. Let us also provisionally title the course: “Genomic citizens and misfits in a digital age.” For the product of this project, each student will contribute either a session for this imagined course, a semester-long course project, or a toolbox of methods.

The contributions should include a rationale and possible connection with other components of the syllabus, but there is no expectation that everyone's contributions cohere or that there is no overlap. (This said, keep in mind the question of project 1: "What does it cost to establish knowledge in a certain place at certain time for a certain people?") Nor is there an expectation that your contribution is in an area that you know well—the aim of this project, as in all PBL, is that you learn through your inquiries, which typically open out wide at first and evolve in unexpected directions, before you focus in to a coherent product.

Sequence of steps and classes:

8. Situational map (Clarke 2005) or Intersecting Processes diagram (Taylor) for selection of readings from bibliography provided by instructors

Focal reading: Clarke, A. (2005). *Situational Analysis: Grounded Theory after the Postmodern Turn*. Thousand Oaks, CA: Sage, Chapter 3

Prompt for journal entry (b/w session 8 & 9): TBA (Possible: Compare and contrast your situational map and the others)

Spring break

9. Close critical reading of scientific texts: What is there? What is not-there?

Focal reading: Kendler et al. (2002)

Prompt for journal entry (b/w session 9 & 10): TBA

10. Presentation of a session for this imagined course, a semester-long course project, or a toolbox of methods. Submit your contribution in a written form, making explicit the rationale for the lesson in relation to the goal that the course as a whole would better prepare someone like you to study and engage with these topics, so that, at some future time, you might have a coherent narrative and/or teach about these topics (i.e., the promises, fears, and claims being made about genetics in this evolving digital era, especially as these developments shift our ideas and actions concerning race and gender).

Focal reading:

Prompt for journal entry (b/w session 10 & 11): Digest comments on presentation

B/w 10 & 11. Comment on the written contribution of another student.

12. Resubmit your contribution, revised in response to comments from an instructor and a peer.

Materials:

Bibliography on genetics, kinship, social media, race, gender

Braidotti, R. (2003) "Cyberteratologies: Female Monsters Negotiate the Other's Participation in Humanity's Far Future." In Maureen S. Barr, ed., *Envisioning the Future: Science Fiction and the next Millennium*.

Butler, O. (1987-89). *Xenogenesis*. New York: Warner Books.

Clarke, A. (2005). *Situational Analysis: Grounded Theory after the Postmodern Turn*. Thousand Oaks, CA: Sage, Chapter 3

Goto, H. (1995), "Tales from the Breast." *Absinthe*.

Kendler, K. S., C. O. Gardner, et al. (2002). "Towards a comprehensive developmental model for major depression in women." *American Journal of Psychiatry* **159**: 1133-1145.

Löwy, I. "FISHing for identity: Maternal-foetal traffic and the change in the meaning of pregnancy" (unpublished paper on microchimerism, 2009).

Mitchison, N.(1975). *Solution Three*. NY: Feminist Press.

Palwick, S. (2003), "Gestella." *Starlight* 3

Surkan, K. (2015) "Free the Data" ms.

Taylor, P. J. (2009). "Infrastructure and Scaffolding: Interpretation and Change of Research Involving Human Genetic Information." *Science as Culture* 18(4): 435-459.

Taylor, P. J. (2010ms), "Diagramming of Intersecting Processes (a teaching activity under development)"

Project 4 (classes 11-13)

Plans for Practice

(A project in which you develop a personal plan to foster the development of others in their learning on some of the issues raised in this course and practice some of what you plan)

This project is an opportunity for you to build on the first three projects and develop your own PBL projects for teaching, prepare grant proposals for further inquiry or activist engagement, or construct syllabi around topics in feminist and critical studies of science and technology. In class sessions, you will have 45-60 minutes to practice some part of a plan for practice with the class as your audience, pretend-students, subjects, jury (for a grant proposal) or critical friends. Your written product, the plan for practice proper, should have two levels: 1. A plan for your own ongoing learning so as to be able to trouble the boundaries of knowledge production in the academy and sciences. More specifically, so as to be able to interpret sciences in contexts, drawing on and adding to the contributions of feminist, anti-racist, and other critical analysts and activists; 2. Building on the first, personal level, what is your plan for practice to develop your ability to foster the development of others in this same vein.

Sequence of steps:

11, 12, or 13 Practice leading everyone in an activity, lesson etc. from your plan for practice. Prepare as instructed for other students' activities, lessons, etc., participate during class, then provide feedback.

Focal readings: TBA (according to emerging student interests. Discussed in class if TBA; otherwise, through annotations submitted to the blog)

Prompt for journal entry (after session when you practice): Digest comments on presentation

Prompt for journal entry (b/w other sessions): TBA (Possible: PBL as feminist pedagogy)

13. Submit plan for practice, revised and developed in response to comments on practice in class.

B/w 13 & 14. Comment on the written product of another student.

One week after 14. Resubmit your product, revised in response to comments from an instructor and a peer.

Class 14. Cultivating support for ongoing learning II: Where have we come from; where are we going

Preparation:

Peer commentary due on draft final project report (= last chance for participation item g)

Assignment checklist ready for review (=participation item h)

Bring laptop if you have one

Session:

Dialogue Process on “Cultivating support for ongoing learning: Where have we come from; where are we going”

Final course evaluation online evaluation (Make a copy for yourself before submitting it.)

V. Bibliography

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See also:

Bibliography for [Project 3](#).

Contributions from students [2009](#), [2011](#), and [2013 & 2015](#).

Other bibliographic resources [2009](#), [2011 \(feminist epistemology\)](#).

VI. Notes on course routines and assignments

Class routines

Blog

The private wordpress blog serves as the out-of-class-time space for sharing and exchange, including posting of annotations and project products (after revision in response to instructor and peer comments). After the class is over, students can continue to refer back to the resources accumulated there. Exchanges on the blog are meant to supplement, not substitute for time spent pursuing inquiries for the projects.

Check-in

Classes will generally begin with a warm-up and check-in, e.g., sharing of highlights of reflections and annotations added to the blog or a reflective activity, except weeks 1 and 14, and weeks when there are presentations.

Focal Weekly Reading

The diversity of students' inquiries on the four projects and thus range of reading is unavoidable and important. However, as a response to the need expressed by past students for some shared referents, *one* focal reading will be assigned each week to be discussed in various modes (to be specified), such as annotations posted online ahead of class, time-limited spoken reports on the 9 categories of note-taking summarized at <http://wp.me/p1gwfa-J8>, guided close reading, and five-phase dialogue (<http://bit.ly/FivePhase>).

Workshop

Except when there are presentations, most class sessions, after the check-in and discussion of the focal reading, take the form of a workshop, in which various activities are used to move along your inquiry for the given PBL project. Details of these activities are linked to the class session on the course website.

Presentations

When you prepare to give a well-prepared presentation, when you hear yourselves speak your presentation, and when you get feedback, it usually leads to self-clarification of the overall argument underlying your inquiry and written product. There may or may not be time for extensive discussion, but your revision of the draft product will be informed by everyone else in the group providing "plus-delta" feedback with appreciations, suggestions, questions, contacts, and references. You can also learn from compare-contrast with the other students' presentations.

Visual aids should be prepared without diverting your time away from your ongoing inquiry.

Peter: "These days I use pdf's, not Powerpoint, for all my talks, in part because of bad experiences with some images not showing up when ppt files got shown on a different operating

system. But mostly because I can write and revise outlines in Microsoft Word and then, when I'm ready, I change the font size, "print" as a pdf, and I'm ready to go live. I don't get distracted by animations, backgrounds, fade-ins and other non-essential features of a talk. Even if you don't take this tip, try to make one introductory slide that captures the overall structure and logic of your inquiry. This might be enough of a visual aid that you can talk to that slide and not have to prepare many others."

Annotations

In order to learn from the inquiries of the other students, annotated references or resources (=person, organization...) related to the projects or common readings should be added (regularly, not all in a clump) to the evolving bibliography on the blog. (Annotations should convey the article's key points as well as its connection to the student's own inquiries and interests. Examples from past years will be provided. Prepare first on your computer, then copy and paste the annotated reference into blog. Specify the category Bibliography.)

Dialogue around Written Work

The instructors try to create a dialogue with each student around written work, that is, around your writing, our responses, and your responses in turn. For each submission one of us makes comments on a cover page that aim to show you your voice has been heard and to reflect back to you where you were taking us. After the overall comments we make specific suggestions for how to clarify and extend the impact on readers of what was written. You then revise and resubmit the submission in response to our comments and peer commentary (see below). The goal is not that you make changes to please us or to meet some unstated standard, but that you as a writer use the eye of others to develop your own thinking and make your written exposition of that thinking work better on readers. In short, Revision entails some "re-envisioning," not copy-editing or superficial changes.

Peer commentary

An instructor will forward another student's project drafts to you by email for peer review after you submit your own draft.

One component of cultivating support for ongoing learning is sharing one's work at the same time as defining the kinds of response you need at that point. Peter Elbow provides valuable perspectives and options for when you decide what approaches to commenting you ask for as a writer (which you should state at the top of your draft) and what to use as a commentator. (You may be used to making lots of specific suggestions for clarification and change in the margins, but such suggestions do not often lead students to go beyond touching up into re-thinking and revising their ideas and writing. This said, all writers value comments that reassure them that they have been listened to and their voice, however uncertain, has been heard.)

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Private Learning Journal

Reflection on your experience of the course process, especially in relation to the two desired outcomes, namely: you will have charted a path into an ever-growing body of work on the interpretation of sciences in contexts, to which feminist, anti-racist, and other critical analysts and activists have made significant contributions; and you will have formulated a personal plan for ongoing inquiry that troubles the boundaries of knowledge production in the academy and sciences.

Students need only share enough of these journals with the instructors to show that they are making entries at least once per week. However, students may also share entries on the blog if they wish.

Prompts for journal entries are given in the class schedule, but the prompts are suggestions not directives.

Notes on assignments

(Examples from previous courses will be linked to these Notes on the course website.)

Written assignments and presentations

Presentations (length TBA according to number of students in course) derived from time spent between classes and during in-class workshop on each PBL project. Expectations (see under Class Routines, above).

Draft and revised products are submitted by email to both instructors, with GCWScourse in the subject line (so submissions don't get lost in inboxes). All filenames should start with GCWSxy, where xy = your initials and be followed by a name that identifies the assignment, e.g., Projectz or (when revised) GCWSxyProjectzRev, where z = the project number.

See also Dialogue Around Written Work and Peer Commentary (under Class Routines, above).

Participation items

a. Attendance and Participation in class meetings based on Preparation between classes, including focal reading (=14 items)

- incl. punctuality, no cell phone calls
- In emergencies, but by prior arrangement, students can be brought into class by google hangout.

b. Syllabus "Treasure Hunt", to get familiar with organization of course materials and requirements

c. Annotated reference or resource (=person, organization...) added (regularly, not all in a clump) to the evolving bibliography on the blog (=8 items)

- Annotations should convey the article's key points as well as its connection to the student's own inquiries and interests. Examples from past years are provided. Prepare first on your computer, then copy and paste the annotated reference into blog. Specify the category Bibliography.

d. Reflection on your experience of the course process and your learning in the PBL format (at least 10 weekly entries = 5 items)

- Although posting the entries to the blog is optional, interaction between class meetings is valuable in this course because we are based on different campuses and because of the evolving nature of the PBL experience. Specify the category ProcessReflection.

e. Minimum of two in-person or phone conferences on your assignments and projects—one before session 5, the other, with the other instructor before session 10 (= 2 items)

- These are important for checking in, taking stock, getting a recharge, ensuring timely resolution of misunderstandings, and opening up significant issues about one's relationship to the course material and objectives. If you are falling behind, conferences are especially important.

f. Exercises to prepare for class (in comments on designated blog posts, for sessions TBA; 4 items)

g. Peer commentary on other students' draft products (3 times, by the session after posting; 3 items)

- An instructor will forward another student's project drafts to you by email for peer review after you submit your own draft.

- *If you won't be able to review an assignment sent to you, immediately reply to the instructor so the assignment can get sent to a different student.* Send comments by a week after the draft submission date to the student with cc to the instructor who commented on it. Make sure the subject line remains GCWScourse.

To get the kinds of response you need, state what you are looking for at the top of your draft.

- h. Your assignment Checklist filled-in during semester and submitted with self-assessment on the rubric at the last session (1 item).