# INF 385U Syllabus Spring 2015

## Basic information

Instructor: Melanie Feinberg

Class location: UTA 1.210A

Date and time: Thursdays, 12:00 p.m. to 3:00 p.m.

## Instructor information

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## Course description

INF 385U is an inquiry into the unknown. In this course, we do not assume that we already know what information collections do, how they work, and what they are for. Together, as a community of scholars, we conduct design-oriented experiments to understand information collections, their creation, and their use, in new ways.

This semester, our investigations will explore how a designer’s reading, or interpretation, of different types of constituent materials contributes to the designer’s writing, or shaping of those materials, and so contributes to the user experience of a collection. We will pay particular attention to the authoring and display environment in which a collection is embedded, and how that environment is itself a sort of design material.

As users, when we consider many forms of design, we might naively assume that a designer has a vision of a finished product and then selects the appropriate materials and tools to enact that vision. A woodworker imagines a table, selects a slab of walnut, and brings forth the envisioned artifact. In reality, the material is not subordinate to the vision in this easily defined way. Designers, materials, and tools come together in a sort of dialogue. The table depends not only on the woodworker’s knowledge, skills, and values in interpreting the expressive potential of the walnut, but also in the available tools for the project and the woodworker’s abilities to use those tools.

For digital artifacts like information collections, this picture becomes even more complex: digital artifacts are densely layered creations that rely on the integration of various sorts of components. The materials of an information collection include not only the resources being collected and the descriptive infrastructure—metadata—that gives them character and makes them accessible, but the authoring and display environments in which those components are embedded, environments such as the paper cards and file cabinets of an old library card catalog or the combination of software and data formats that underly current digital catalogs. Moreover, the ways in which the collection designer *reads,* or perceives and interprets, this dynamic array of materials, and the ways in which the collection designer perceives his or her role in *writing,* or drawing forth, the reading experience for eventual “users” of the collection, also contribute to the character of the product.

Our goal this semester is to interrogate how such elements participate in the authorship of digital information collections. Because the role of authoring and display environments tends to be omitted in discussions of information collections and their metadata skeletons, we will pay particular attention to this element.

We will concentrate on the following guiding questions:

* How does a designer’s mode of reading—interpretive understanding of constituent materials—participate in the authorship of an information collection?
* How does a designer’s mode of writing—understanding of what collection authorship entails—participate in the authorship of an information collection?
* How does an authoring environment participate in the authorship of a collection?

We will examine these questions through the experience of different forms of collection authoring, in which the collection being designed is itself a constituent “material” to be worked: first translating an existing collection to a different authoring and display environment and then freely extending the collection into the new environment as seems appropriate.

In conducting your translation/extension design project, you will assume authorship of an existing experimental collection that was created to purposefully enact the notion of residuality, or the experience of being insufficiently described via a classification system, through the information collection's descriptive infrastructure (metadata). Because expression of the residual appears to rely on both transparency and subjectivity, these experimental collections provide a rich testbed to explore our questions regarding authorship, its components, and its effects on experience.

Structurally, this course combines seminar-style, focused discussions of readings with project-based elements of a design studio. We will use activities of critically interrogating experimental designs, translating and extending those designs, and reflecting back on our process and product to generate insight into our foundational questions. Our design practice will be grounded in the idea that a collection is both a form of expression and a form of experience, shaped by the designer, or author, but brought into being by user (or audience, or reader) interactions with the collection's resources.

Practically, the ideas we engage and the skills we will learn should be applicable to any sort of information collection. However, our design environment for this course will focus on digital media collections (specifically videos) made available online as a type of digital library.

## Experimental context 1: Residuality, ambiguity, and mestiza consciousness

To enable more efficient searching, sorting, and synthesis of information, many of our choices for describing things—documents, data, ourselves—are mediated by controlled vocabularies, or classification schemes. On standardized forms, for example, we declare our marital status by selecting either Married or Single, and we specify our gender by selecting Male or Female. While using a formalized system of categories has many advantages for aggregating and analyzing information, it also has a flattening effect on the interpretation of the object being described. Our reasons for selecting Single may be very different, for example: that category can encompass the divorced, the widowed, the gay couple who cannot marry in their locality, those who object to marriage for political reasons, and so on. However, that diversity is not carried through in the category system, where only Single and Married exist as descriptive terms. In other situations, an object might not fit any defined category, as when a movie incorporates elements of a mystery, a romance, a political thriller, and a tragedy, all at once.

The sociologists Susan Leigh Star and Geoffrey Bowker describe the state of not quite fitting into a classification scheme as being *residual,* and they comment upon the effects of this exclusion: from feelings of invisibility and pain to feelings of pride and empowerment. The state of residuality has connections to the feminist writer Gloria Anzaldua’s idea of *mestiza consciousness,* or of a life experience that continually crosses and recrosses borders and boundaries.

Mestiza consciousness conceptualizes the residual as a continuously dynamic process of transformation. The Coatlicue state of transition described by Anzaldua is neither the acceptance nor rejection of an opposition but something beyond it. As Anzaldua describes in Borderlands, the new mestiza who lives the Coatlicue state "operates in a pluralistic mode…not only does she sustain contradictions, she turns the ambivalence into something else" (p.101). The new mestiza shows within herself a path between oppositions, a path that has a specific history of travel inscribed within it but has no endpoint. From the perspective of classification schemes, we can think of this as a continual process of understanding what a category like “Single” means: what it means to be Single, to not be Single, to be Single or not be Single as a specific, ephemeral experience.

Mestiza consciousness can also be seen as a form of rhetorical strategy. In *Borderlands,* Anzaldua shatters document forms in a way that makes the reader's path echo the mestiza's path. The reader must work through material that is, frankly, irritating in its density and apparent lack of coherence as indicated by existing genre conventions. It is only through accepting a level of unknowing that the reader can progress in understanding.

An attempt to enact mestiza consciousness/residuality in an information collection will also need to alter its forms, potentially in a disquieting or initially annoying way, as traditional goals, such as efficient information retrieval, are subverted through the alteration of features that typically support those goals. For example, in a traditional well-constructed controlled vocabulary, the relationships between a broader category and its narrower terms should be apparent, consistent, and coherent. In a vocabulary motivated by mestiza consciousness, this might not be the case (or might not always be the case).

In this course, the experimental collections that we will translate and extend were initially created to exploit the gaps and borders between categories, instead of hiding them. Most scholars of classification assume the phenomenon of residuality to be inevitable. A classification’s power to make sense of data results from its ability to consistently discriminate between exemplars, and encouraging ambiguity would seem to work against those ends. Indeed, it seems necessary that any project of classification, in its double action of both sharpening some edges and blurring others, will distort the items it orders, sometimes slightly and sometimes significantly.

The experimental collections that we’ll be working with in this class explore what happens when we exploit this phenomenon as a designed feature, instead of trying to eliminate it like a software bug. In your translation and extension activities, you will assume authorship for an experimental collection that purposefully emphasizes such contradictions instead of trying to erase them. As such, you cannot rely on conventional notions of “usability” to assist you in making decisions; *the collections that you will be working with were not designed to be “usable” in a traditional sense but to critically question what ideas like “usability” mean. You will be continuing and extending these experiments with your design project.*

## Experimental context 2: Critical design and the generation of new knowledge

In this class, we will learn together about our motivating questions regarding authorship through the process of making objects that transgress conventional design values. This research approach is called *critical design.*

Critical design is an emerging methodology in human-computer interaction, and there is no standard approach to it, and no standard set of questions or goals. In this class, we will adopt a form of critical design in which we try to understand a class of artifacts (in this case, information collections) by making provocative variations of these artifacts that are motivated by particular theoretical principles (in this case, to enact a form of mestiza consciousness). *Provocative,* for us, involves the principled, systematic inversion of traditional design goals regarding category definitions. It does not necessarily mean overtly wild or crazy (in other words, there is no expectation to be “artistic” or “creative” in some conventional sense). Our learning will emanate from both the process of making and sustained, scholarly reflection upon the products that we create.

Accordingly, the goal of your translation/extension design projects is to generate insight into our motivating questions. It is not to create a “good” design; it is to question received ideas of “good” design and learn more about what different perspectives on “good” might mean. A successful project makes you think productively. It might, in conventional terms, be a “failure,” in that it doesn’t turn out as you expect, or you don’t like it, or you think it’s boring, unusable, annoying, or stupid. None of those things are “bad” in this context. So feel empowered to take risks and “fail” as gloriously (or as mundanely) as you can.

## Policies

### Instructor communication

E-mail is the official mode of communication for the university and the most reliable means of contact for me. I do my best to answer e-mail within a two days of receipt. If you do not receive a response after a few days, please follow up. It is always helpful if your e-mail includes a targeted subject line that begins with “INF 385U.” *Do not use the messaging facilities in Canvas; these messages do not arrive in my e-mail in-box.*

### Late assignments

*Late assignments are not acceptable.* For each day that an assignment is late, ten percent of the possible points will be deducted from the score, rounded up (that is, if the final reflective essay, worth 25 points, is one day late, the maximum number of points for the late assignment is 22, or 25-3 [2.5 rounded up]). *Students who anticipate difficulties with completing assignments on time should consult with the instructor as soon as possible so that alternate solutions can be discussed.* When negotiated in advance, arrangements can often be made.

### Attendance

Attendance is not taken. You do not need to inform me of absences, nor do you need to “make up” anything if you are absent. While participation is an important part of your grade, and attendance is important, there are no specific requirements for mandatory attendance.

### Students with disabilities

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259. (Or see their Web site.)

### Academic integrity

I follow University of Texas standards for academic integrity, as documented on the Dean of Students’ Web site and in associated materials. It is very important that academic work is conducted according to accepted ethical standards. If you uncertain whether an action is in keeping with academic integrity standards, please consult with me before undertaking it.

## Assignment basics

There are five graded components to this course:

* Seminar participation (15 points).
* Seminar facilitation (10 points).
* Interpretive essay that examines the initial form of the design experiment you will translate and extend (25 points). *Due February 26.*
* Design translation/extension project (25 points). *Due April 30.*
* Final reflective essay (25 points). *Due May 7.*

All written assignments should be printed and brought to class. They are due at 3 p.m. (the end of class). There is no need to send me an electronic copy.

When crafting assignments, follow the instructions carefully, and pay special attention to the grading criteria. All written assignments are graded based on the criteria listed in this syllabus; the number of points available for each assignment is divided equally (or as near to equal as possible) between the defined criteria.

## Discussion Participation and Facilitation

As a studio-based class, much of our learning is based in reflection upon practice, in using design-focused project work to engage with fundamental questions of how we read and write information collections.

To enable rigorous, sustained exploration of these concepts, it is important to regard the classroom environment as a scholarly community of design researchers, a design laboratory, if you will, where everyone is responsible for contributing to the evolving understanding of the group. In-class conversations and working collaborations, where readings and current design activities are discussed and debated, will form a key aspect of the course.

In class, everyone needs to contribute ideas, questions, and perspectives. Students who make consistently thoughtful contributions, reference appropriate course readings and project activities, propel discussions onward, and listen attentively to the ideas of their colleagues will receive the highest participation grades. Note that asking questions and getting the assistance of the group when you are not certain that you understand something is a perfectly valid (and often quite useful) form of participation.

While all students should come prepared with at least one question from the readings to contribute to class discussion, primary responsibility for facilitation will be assigned to one or two students per week, beginning in Week 3 of the course. As the discussion facilitator, you will be empowered to direct the conversation towards areas that you find most intriguing. You will be responsible for initiating, mediating, and maintaining the flow of dialogue for half the seminar portion of the class (approximately 35 minutes).

We will select facilitation dates during the first class session.

Participation is not based on attendance, although excessive absences will of course be noticed.

*Grading criteria*

for discussion participation

* Displays evidence of careful reading of the assigned materials.
* Formulates reasoned opinions based on evidence from the readings (and from outside knowledge and experience as appropriate).
* Focuses on significant ideas and not on minor details (such as writing style or the meaning of particular words or sentences).
* Through observations, comments, and questions, helps the group come to a greater understanding of the assigned materials.
* Relates readings to other class assignments (interpretive essay and design project) and to motivating research questions for the class.
* Listens to others and responds appropriately; respectful debate is encouraged.

for discussion facilitation

* Displays evidence of careful reading of the assigned materials by referring to particular themes, concepts, or passages.
* Provokes dialogue on significant ideas by providing a clearly reasoned position for colleagues to react to, or by carefully explaining a matter of confusion and asking for help.
* Prompts others to relate readings to class assignments (interpretive essay and design project) and to the motivating research questions for the class.
* Ensures that all students’ voices are heard.

## Interpretive essay

In this assignment, you will analyze the experimental collection that you will eventually translate and extend. You will describe how the collection works as a both a means of examining residuality (or, we might alternately say, enacting mestiza consciousness) as well as how it works as an information experience.

The experimental collection that you will examine was created as a “transformation” of a traditionally structured library of 56 videos in the general subject area of Sustainability. The goal of the initial design experiment was to highlight and investigate the idea of residuality in information collections. (As we will discuss in Weeks 2 and 3 of the course, traditional metadata design practice seeks to minimize the experience of the residual as much as possible. These experiments invert that traditional design goal.) In the translation/extension design project, you will continue and extend this design experiment.

You will have a set of potential design experiments to select from; we’ll discuss this the first day of class. Instructions for accessing the “source” design experiments will be available in Canvas.

We will select designs to work with in the second class session.

*Your mission*

You will adopt the role of an information critic in addressing two questions regarding your selected experimental collection:

* How does this collection foreground the experience of the residual?
* What constitutes the reading experience of this digital collection?

You will critically examine how your collection works as an interactive information experience, or an expressive database. For example, you might examine how the collection is consistent in some ways and inconsistent in others, and how that suggests certain actions of modes of understanding on the part of the reader. Do the inconsistencies seem principled, or motivated? Do they structure productive questions on the part of the reader, or are they merely distracting? In making a case one way or the other, you will need to use concrete examples from the “text” to provide persuasive evidence for your argument.

*Deliverables*

The final paper should be approximately 3,000 words (around 10-12 pages). While your essay should address specific aspects of the collection under scrutiny, your paper should have a larger argument to give it cohesion. In other words, the essay should not merely list design elements that you find effective or not effective, but should synthesize your analysis of these elements to reveal a broader thesis about how the collection works and the experience it offers to the reader.

*Grading criteria*

A successful interpretive essay will exhibit the following characteristics:

* Presents a coherent thesis that unites your thoughts about the collection.
* Explains how the collection works: what it conveys about residuality and how its descriptive infrastructure (metadata) works to convey (or not convey) that position.
* Explains the reading experience that the collection offers. What forms of interaction does the collection suggest? (The collection probably does not facilitate finding information in typical ways. What actions does it facilitate?)
* Adheres to professional writing standards: is logically structured and organized, is clearly and concisely written, adopts a professional, scholarly tone, and uses correct grammar, spelling, and punctuation.

## Translation/extension design project

In this project, you will assume authorship for the experimental collection that you examined in your interpretive essay. The existing implementation of the experimental collection is your foundational *design material.*

You have two design tasks with your collection.

First, you will *translate* the original implementation from its initial authoring and display environment, the Open Video Digital Library Toolkit (OVDLT) to a new authoring and display environment, Scalar. This translation task is more complex than it might initially sound, because Scalar is very different from the OVDLT. Although you will be able in some fashion to translate the existing collection to Scalar, this will require extensive design judgment and authorial discretion.

You can take whatever approach you like to this “translation”: it can be strict or loose, as you see fit. But the goal is to express your sense of the original implementation’s experience in Scalar.

Note that this project does not require any technical skills or expertise. The video resources will be imported (or linked) for you into an otherwise blank Scalar “book.” Using Scalar requires no previous knowledge of anything; it’s just an application, like Microsoft Word.

Second, you will *extend* the translation more deeply into Scalar, freely amending and adapting its design elements however you see fit. For the extension task, you can revamp the original collection any way you like; you do not need to “express your sense of the original implementation’s experience.” You can change it as much as you want, to perform in whatever ways you want (although you do need to maintain the original conceit; for example, if the original design presented each video as a fairy tale, you also need to present each video as a fairy tale—but you can change the way that’s done as much as you want).

*Your mission*

The experimental collection that you will assume authorship for primarily uses descriptive infrastructure—different kinds of metadata—to foreground and interrogate the idea of residuality in an information collection. The precise metadata operations used in the collection were conditioned by the original authoring environment, the OVDLT.

In translating and extending the collection to Scalar, you, as the new author, will continue and extend the collection’s experimental goals in foregrounding and interrogating residuality. In doing so, you will create and enact strategies for adapting the collection’s OVDLT design elements (descriptors, summaries/abstracts, titles, responsible entities, dates, key frames, tags, collections and playlists) into Scalar in a way that most effectively contributes toward the realization of those expressive goals.

*Deliverables*

There are three parts to this project:

* The experimental collection “translated” to a Scalar book.
* The experimental collection “extended” as a second Scalar book.
* A written “design brief” that explains your strategy for both the translation and the extension.

In its original implementation, each experimental collection made use of (or determined reasons for not using) a set of metadata elements available in the Open Video Digital Library Toolkit (OVDLT).

Your translation does *not* need to recreate these elements as they were used in the OVDLT; you could decide to implement the “spirit” of these elements very differently in Scalar. Or you might determine there is no way to productively implement these elements in Scalar, and omit them. Still, your translation and extension strategies need to *consider* these design elements and determine the best means of representing them in the Scalar environment. Your design brief should, accordingly, provide a rationale for how these elements were accounted for in your translation and extension.

These OVDLT metadata elements are:

* Library title.
* Descriptors.
* Records for individual videos, including:
	+ Titles and alternate titles.
	+ Sentence summaries.
	+ Abstracts.
	+ Responsible entities.
	+ Tags.
	+ Dates.
	+ Key frames.
	+ Descriptors.
* Collections and playlists.
* Featured videos and collections.
* About page, News page, and Contact page.

To assist in your project, you will be given the design brief for the original implementation, which describes original author’s use of elements to achieve the collection’s design goals.

For the extension, your brief should make reference to additional Scalar features unrelated to your translation of the OVDLT elements, and your rationale in incorporating them (or not) into the extended design.

Additionally for the extension, several new videos will need to be incorporated into the design. You will receive these new videos in the course of the semester.

*Grading criteria*

A successful project will exhibit the following characteristics:

* The brief identifies identifies your strategies for translation and extension and describes how these strategies are enacted in each Scalar book, for each OVDLT element. (For the extension, reference to additional Scalar features and your rationale for incorporating them (or not) will likewise be necessary.)
* The strategies outlined in the brief and enacted in the translation and extension are thoughtful and considered.
* The translation and extension follow the strategies outlined by the brief and use the Scalar features as described.
* The translation and extension are both complete (that is, all the videos have been recataloged according to the established approach, and so forth).

Note that these grading criteria do not refer in any way to your design project’s “success.” As long as you are “thoughtful and considered” in creating your strategies, they can fail as miserably as possible in terms of the ultimate product.

## Final reflection

In this essay, you will ponder what you have read, what you have done, and what you have produced in this class, and you will write a cohesive paper that uses these thoughts and experiences to reflect upon the three motivating questions for the course.

*Your mission*

Your paper should describe what the experience of translating and extending an experimental collection, as well as your interpretation of the product that you created, reveals to you about:

* How a designer’s mode of reading—interpretive understanding of constituent materials—participates in the authorship of an information collection.
* How a designer’s mode of writing—understanding of what collection authorship entails—participates in the authorship of an information collection.
* How an authoring environment participates in the authorship of a collection.

You may also find it helpful to reconsider your characterization of the original implementation as described in your interpretive essay.

*Deliverables*

Your final reflective essay should be approximately 3,000 words (around 10-12 pages). As with your interpretive essay, your paper should have a larger argument to give it cohesion. In your essay, use both the course readings and your design project experiences to substantiate your answers to the three questions. Make sure, though, that the emphasis is on critical examination, and not a mere report of what you did or a justification for your design decisions.

*Grading criteria*

A successful essay will exhibit the following characteristics:

* Presents a coherent thesis that unifies your response to the different questions.
* Provides evidence for claims via both course readings and project design experiences.
* Goes beyond anecdotal experience and justification of individual design decisions.
* Adheres to professional writing standards: is logically structured and organized, is clearly and concisely written, adopts a professional, scholarly tone, and uses correct grammar, spelling, and punctuation.

## Grading

I will use the following schedule in calculating final grades:

|  |  |  |
| --- | --- | --- |
| A = 95-100 | A- = 90-94 | B+ = 85-89 |
| B = 79-84 | B- = 74-78 | C+ = 69-74 |
| C = 64-69 | F < 64 |  |

## Schedule

*Note:* Readings are subject to change as the semester proceeds. Announcements about changes will be made in class; however, please continue to check the Web site for up-to-date schedule information.

| **Date** | **Themes** | **Assignments** | **Readings** |
| --- | --- | --- | --- |
| Week 1January 22 | introductions to* the course
* the translation/extension design project
* the authoring environment for the design project (Scalar)
 |   | Griffithsastrophy (blog post on Jezebel)*Optional*genderfork.com (just browse around) |
| Week 2January 29 | introduction to traditional classificatory principles*Studio exercise:* Enacting hierarchy  | *Optional* Scalar introductory Webinar, 10 a.m.-12 p.m. | Beghtol Grove Mills |
| Week 3February 5  | introduction to residuality/mestiza consciousness *Studio exercise:* Group interpretation of a design experiment |  | Star and Bowker Anzaldua (Chapters 1-7, pp. 22-113, and pp. 216-217 only)  |
| Week 4February 12  | introduction to critical making and critical design *Studio exercise:* Transforming hierarchy |   | Ratto Bardzell, Bardzell, Forlizzi, Zimmerman, and Antanitis Sengers, et al McGann and Samuels*Optional*Bardzell and BardzellBardzell, Bardzell, and StoltermanPierce and Paulos |
| Week 5February 19 | information criticism *Studio exercise 1:*Group interpretation of a design experiment |   | Lowgren and Stolterman Bardzell |
| Week 6February 26 | Wayfaring and transport as reading (interaction) models *Studio exercise:*Enact and transform hierarchy in Scalar | *interpretive essay due* | Ingold (selections)Feinberg, Carter, and Bullard |
| Week 7March 5  | design, materials, and materiality | *Bring to class for studio discussion:* Translation strategy/ideas in Scalar | PyeRosnerDrucker |
| Week 8March 12 | authorship and the rhetoric of collections  | *Bring to class for studio discussion:* Partially translated collection | Crew and Sims Goswamy Garrett Stephens |
| March 19 | *spring break* |  |  |
| Week 9March 26 | constructing the audience  | *Bring to class for studio discussion:* Roughly completed translation enacted in Scalar (strategy enacted for all parts) | Tyler Black Di SalvoPark |
| Week 10April 2 | open design/reader response | *Bring to class for studio discussion:* Ideas for extension | Redstrom Sengers and Gaver Fish |
| Week 11April 9 | user (audience)/designer (author)/system (collection) relations  | *Bring to class for studio discussion:* Extension strategy/experiments enacted in Scalar | WarnerWoolgarSuchman  |
| Week 12April 16 | infrastructuring and design after design | *Bring to class for studio discussion:* Partially completed extension/fully completed translation | A. Telier groupBjorgvinsson, Ehn, and Hillgren |
| Week 13April 23  | design reflection and hermeneutics  | *Bring to class for studio discussion:* Roughly completed extension (strategy enacted for all parts) | Vetting Wolf, et al Snodgrass and Coyne Jahnke |
| Week 14April 30 | Informal design project presentations and discussion*Studio exercise:* Whose authorship? | *Translation/extension design project due* |  |
| Week 15May 7 |  | *final reflective essay due* |  |

### Readings

There is one assigned book. It is not available at the Co-op, but you can get it through Powell’s online or other sources. It is:

Anzaldúa, Gloria. 2012. Borderlands/La Frontera: The New Mestiza. 4th ed. San Francisco: Aunt Lute Books. (It really shouldn’t matter which edition, but this is the current one.)

Other readings are available in Canvas.

*Complete bibliography*

astrophy. (2014) I am genderfluid. Blog post on Jezebel group think, April 4, 2014. (Available at: http://groupthink.jezebel.com/i-am-genderfluid-1558789334)

A. Telier. (Binder, T., et al.) (2011). *Design Things.* Cambridge, MA: MIT Press.

Bardzell, Jeffrey. (2011) Interaction criticism: an introduction to the practice. Interacting With Computers.

Bardzell, Jeffrey, and Shaowen Bardzell. (2013) What’s critical about critical design? *Proceedings ACM CHI 2013,* 3297-3306.

Bardzell, Jeffrey, Shaowen Bardzell, and Erik Stolterman. (2014) Reading critical designs: supporting reasoned interpretations of critical design. Proceedings ACM CHI 2014, 1951-1960.

Bardzell, Shaowen, Bardzell, Jeffrey, Forlizzi, Jodi., Zimmerman, John., and Antanitis, J. (2012) Critical design and critical theory: The challenge of designing for provocation. Proceedings of the ACM Conference on Designing Interactive Systems (DIS) 2012. ACM: New York.

Beghtol, Clare. 2009. Classification theory. In Bates, Marcia, and Mary Niles Maack (eds). Encyclopedia of Library and Information Sciences. 3rd ed. CRC Press.

Black, Edwin. (1970) The second persona. *Quarterly Journal of Speech,* 56(2): 109-119.

**Bjögvinsson, E., Ehn, P., and Hillgren, P-A. (2012). Design things and design thinking: contemporary participatory design challenges. *Design Issues* 28(3): 101***–***116.**

Crew, Spencer R., and James E. Sims. (1991) Locating authenticity: fragments of a dialogue. In *Exhibiting Cultures: The Poetics and Politics of Museum Display. Ivan* Karp and Steven D. Lavine, eds. Washington, DC: Smithsonian Institution Press, 159–175.

DiSalvo, Carl. (2009) Design and the construction of publics. *Design Issues* 25(1): 48–63.

Drucker, Johanna. (2013) Performative materiality and theoretical approaches to interface. *Digital Humanities Quarterly* 7(1). Available at: http://www.digitalhumanities.org/dhq/vol/7/1/000143/000143.html

Feinberg, Melanie, Daniel Carter, and Julia Bullard. (2014) Always somewhere, never there: using critical design to understand database interactions. *Proceedings of ACM CHI 2014,* 1941-1950.

Fish, Stanley (1980). Is there a text in this class? The authority of interpretive communities. Cambridge, MA: Harvard University Press.

Garrett, Jesse James. (2002) ia/recon. Available at: http://www.jjg.net/ia/recon/

Goswamy, B.N. (1991) Another past, another context: exhibiting Indian art abroad. In *Exhibiting Cultures: The Poetics and Politics of Museum Display*. IvanKarp and Steven D. Lavine, eds. Washington, DC: Smithsonian Institution Press, 68-78.

Griffiths, Sarah. (2014). Facebook’s new gender options launch in the UK. *Daily Mail,* June 27, 2014. (Available at http://www.dailymail.co.uk/sciencetech/article-2672359/Facebooks-new-gender-options-launch-UK-Users-select-one-70-choices-including-asexual-two-spirit.html)

Grove, Andrew. 2009. Taxonomy. In Bates, Marcia, and Mary Niles Maack (eds). *Encyclopedia of Library and Information Sciences.* 3rd ed. CRC Press.

Ingold, Tim. (2007). *Lines: A brief history.* London: Routledge. (Excerpts)

Jahnke, Marcus. (2012) Revisiting design as a hermeneutic practice: an investigation of Paul Ricoeur’s critical hermeneutics. *Design Issues* 28(2): 30-40.

Lowgren, Jonas, and Stolterman, Erik. (2004). *Thoughtful interaction design: A design perspective on information technology.* Cambridge, MA: MIT Press.

Markussen, Thomas. (2013) The disruptive aesthetics of design activism: enacting design between art and politics. *Design Issues* 29(1): 39-50.

McGann, Jerome, and Lisa Samuels. (1999) Deformance and interpretation. *New Literary History* 30 (winter, 1999), 25-56. Available at: http://www2.iath.virginia.edu/jjm2f/old/deform.html (it looks weird on the screen, but it prints out fine).

Mills, Jack. 1964. A Modern Outline of Library Classification. London: Chapman & Hall. Chapters 1-4.

Park, Douglas B. (1982) The meanings of “audience.” *College English,* 44(3): 247-257.

Pierce, James, and Eric Paulos. (2014) Counterfunctional things: exploring possibilities in designing digital limitations. *Proceedings ACM DIS 2014,* 375-384.

Pye, David. 1968. *The nature and art of workmanship.* Cambridge, UK: Cambridge University Press. (1-40, 83-96)

Ratto, Matt. (2011) Critical making: conceptual and material studies in technology and social life. *The Information Society* 27(4).

Redström, Johan. (2008) RE: definitions of use. *Design Studies* 29:4, 410–23.

Rittel, H., and Weber, M. (1973) Dilemmas in a general theory of planning. *Policy Science* 4(2): 155–169.

Rosner, Daniela. (2012) The material practices of collaboration. *Proceedings ACM CSCW 2012,* 1155-1164.

Sengers, Phoebe, Kirsten Boehner, Shay David and Joseph “Jofish” Kaye. (2005) Reflective design. *Proceedings of AARHUS 2005.* ACM Press. 49-58.

Sengers, Phoebe, and Bill Gaver. (2006) **Staying open to interpretation: engaging multiple meanings in design and evaluation. *Proceedings ACM DIS 2006,* 99-108.**

Snodgrass, Adrian, and Richard Coyne. (2006) Interpretation in architecture: design as a way of thinking. London: Routledge. Ch. 2, “Playing by the Rules,” 59–70, and Ch. 2, “Design Assessment,” 119–132.

Star, Susan Leigh, and Geoffrey Bowker. 2007. Enacting silence: residual categories as a challenge for ethics, information systems, and communication. Ethics and Information Technology 9: 273–280.

Stephens, Paul. (2012) From the personal to the proprietary: conceptual writing’s critique of metadata. *Digital Humanities Quarterly* 6(2). Available at: http://www.digitalhumanities.org/dhq/vol/6/2/000124/000124.html

Suchman, Lucy. (1994) Working relations of technology production and use. *Computer-Supported Cooperative Work* 2: 21–39.

Tyler, Ann. (1992) Shaping belief: the role of audience in visual communication. *Design Issues* 9(1): 21–29.

Warner, Julian. (2008) A labor-theoretic approach to information retrieval. *Journal of the American Society for Information Science and Technology* 59(5) 731–741.

Wolf, Tracee Vetting, et al. (2006) Dispelling design as the “black art” of CHI. *CHI 2006 Proceedings* 521–530.

Woolgar, Steven. (1991) Configuring the user: the case of usability trials. In John Law, ed., *A sociology of monsters: essays on power, technology, and domination.*