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L-125: Scientific Analysis of the Book
4–9 June, New Haven, Connecticut

Narrative Course Evaluations

1) *Were the pre-course reading assignments useful? Are there any readings that you would like to see added or removed in future years?*

1. All the course reading assignments were incredibly helpful. I enjoyed being introduced to a wide variety of material on the subject, as I came into this knowing close to nothing.
2. Yes, but I'd suggest finding some readings that might be a little more entry-level for this topic. Perhaps a book by a journalist that deals with these topics or a book that approaches this topic from the book conservation side more specifically.
3. I really appreciated that the pre-course readings were more humanities-focused. Some of the readings assigned during the class were more heavily technical, and I found those a little challenging.
4. Yes—I found these pre-course readings to be very helpful.
5. The readings were technical and sometimes challenging for me, as I have very limited background knowledge of chemistry, but on the whole they were fascinating. {private response}
6. Yes, the readings gave me a general understanding of some of the techniques we would discuss in class.
7. The course readings were difficult but helpful for explaining the materials. They helped introduce me to the concepts before the class session, but also were a useful review afterwards.
8. The readings were extremely useful and informative, I only wish we'd received them earlier. I believe they were sent a little over a week before class began, three–four weeks before the class started would have been better.
9. *Condition* (the book) was very useful. Some of the readings were rather technical and also not actually covered in class (e.g., Archimedes palimpsest)—I don't feel it was time wasted, but I would rather have devoted my prep time to case studies and articles discussed in class. There was some discrepancy between daily readings listed online compared to the course materials we received.
10. The course readings were manageable and closely aligned with the lectures. However, I had already sourced most of the materials before they were provided to us as I needed more time to be able to complete them all.
11. Yes, it was useful to read them before class to help establish a base-level knowledge of the concepts and technologies presented in class, especially for those who don't have a

science background.

12. I found the course readings to be quite accessible. As a conservator, I've had some exposure to the methods covered, but very little direct experience, so the readings provided a bit more clarity and a more succinct overview of the topics.

2) *What are your thoughts on the course workbook and/or other teaching materials distributed during class? Was the content appropriate and useful? Will it continue to be useful for you after the course?*

1. As long as we continue to have access to the Google Drive with all of the course material, it will be incredibly helpful in the future. As everything was digital, I hope this is the case.
2. {no response}
3. The PowerPoint presentation slides were incredibly rich. I took much fewer notes than I would have otherwise because I knew I'd have access to the slides (and would remember what they covered).
4. All materials, PowerPoint slides, and resource suggestions will be incredibly helpful as I continue to explore the topics we learned about in class.
5. Not applicable.
6. Having the PowerPoint slides are very useful for revisiting some ideas taught in class.
7. The PowerPoint slides are very helpful resources, and will be valuable reference sources moving forward.
8. Yes, definitely appropriate and useful during class and will continue to be a valuable resource.
9. A course workbook with an overview of techniques, relevant diagrams, examples of spectra &c. would be useful for note-taking, but I understand it'd also be a significant project to put together! I plan to save (and, I'm sure, will continue to refer to) the PowerPoint presentation slides and citations that were shared.
10. There was no course material distributed during the class, but I will definitely refer to the readings and PowerPoint slides from the class in the future for reference purposes.
11. {no response}
12. The materials were each relevant to the day's discussion and provided enough background to be more engaged in the instruction given each day. While some of it was quite dense, the class discussions each day and the top-notch teaching made the material much easier to absorb. I also really appreciated Kristen Herdman's supplemental materials that she shared each day, which I believe will be useful well after the end of the course. I definitely feel more confident in my understanding of the various analytical methods and in my ability to collaborate with conservation scientists in the future.

3) *Which aspects of the course were most intriguing and relevant for you as an individual? Did you*

walk away with any new insights, ideas, or project plans?

1. I walked away with a lot of new insights, ideas, and project plans. It was great having tangible examples to learn from as it helped bring all of the concepts together.
2. I was intrigued by the spectroscopy techniques and appreciated being able to see the equipment in the lab. I will talk to my colleagues about potentially analyzing the books in our collection. I'd like to do more reading on the subject.
3. This class was fascinating—I was thrilled to see an entire course that explored some of the more cutting-edge elements of our field, and I now have a lot of ideas to take back to my institution. RH is a stellar instructor, and I think his energy and attention helped energize the rest of us to do this work.
4. Segments on biocodicology and proteomics were fascinating. I really enjoyed hearing from the guest speakers on these topics.
5. I appreciated the idea of studying an item's microbiome. The possibilities!
6. The whole area was new to me. Now I can say that I have a basic general understanding of the techniques and I can definitely read further in my own time.
7. I am walking away with multiple project ideas in mind, and feel more confident about communicating with others in my institution about the types of technology available.
8. RH is an amazing teacher, his lectures and the lab time were consistently intriguing and informative, and his warm personality and humor really helped me as a non-scientist to take in all the information. To answer the second part of the question—absolutely!
9. Of particular interest were discussions of multispectral imaging, XRF, and protein/DNA testing of parchment—but everything was interesting, and I now have a ton of (too many!) project ideas.
10. I did not have any previous working knowledge of the course subject matter and was drawn to the opportunity to learn something new outside of my subject specialty. The class provided a thorough introduction to scientific technologies and tools that can be used with cultural heritage materials and I left with a plan of how to suggest and advocate for a similar project back at my host institution.
11. Being introduced to many types of analysis and ways to use them in regards to cultural heritage and learning about more recent technologies.
12. I was very excited by all the material we covered, which is of course why I took the class! It was especially helpful that we directly discussed potential project ideas that we could tackle when we return to our own institutions. I definitely have some ideas that I hope to pursue thanks to the class.

4) *Did the instructors help you to acquire all the skills and information promised in the course description? Did you learn what you had hoped to learn?*

1. This course did not feel particularly centered on books. While we focused on

parchment in most instances, there was a heavy amount of painted surfaces discussion, which does not have much to do with my day-to-day. The readings preparing us for the course included information on palimpsests—which was not really covered and something that could be very relevant to my work.

2. I think it would be good to focus a little more on the book side of conservation and analysis. For instance, I didn't gather a ton of insight about paper/parchment analysis and felt like a lot of the material was going over my head.
3. RH and Kristen Herdman were fantastic instructors. The topics introduced are not easy, but RH presented everything clearly, and left ample time for questions. Chemistry was never something I was good at, but I'm coming away from this class with a solid understanding of the concepts and techniques covered in this class.
4. Yes and yes!
5. {private response}
6. Yes, RH is very knowledgeable and kind. I asked him questions that pertain to my own interests and he was very nice to answer them in a very informative way.
7. I learned what I hoped to learn, and much more! I didn't realize how many different options for scientific analysis were available. The instructor helped me understand how the various tools may be used to analyze similar elements in a manuscript.
8. Yes!
9. Yes!
10. Yes. At times, given my limited scientific background knowledge, I felt a bit out of my depth, but the case studies and lab time provided alternative learning modalities which helped me better understand the subject matter. At the onset of the class, the instructor reminded us to always keep your research question close at hand. For me, my learning outcomes were to develop a deeper understanding of the available scientific resources for cultural heritage materials and to build the language for future partnerships. This class fulfilled my objectives completely.
11. Yes, I gained a lot of knowledge and insight from this class.
12. Yes, absolutely!

5) *How do you plan to use the skills and knowledge acquired during your time here?*

1. Developing more thorough imaging practices and having more insight to how the equipment can be used to test a hypothesis.
2. {no response}
3. I hope to partner with faculty at my institution to build engaging assignments and courses for students that use scientific applications to examine special collections materials. This course has given me the vocabulary and enough technical knowledge to feel confident talking with experts in science and medical fields, and to bring ideas to them to brainstorm opportunities for learning.
4. TBD. I will certainly be making some inquiries and seeing what traction I can gain

regarding a project that has been on my radar for quite a while!

5. I plan to approach potential campus partners about analyzing our potentially toxic publisher's bindings. It needs to be done, and will hopefully lead to more complex collaborative efforts in the future.
6. I hope to start reading more articles on art conservation and possibly incorporate some of the techniques we learned in class in my own research.
7. I hope to collaborate with other participants in this course on future conference presentations directed towards other information professionals about the topics addressed in this course.
8. I hope to bring this knowledge into my work with the book collections at my institution.
9. Closer collaboration with conservators at my institution
10. I aim to share what I've learned with my colleagues so that we can advocate for the purchase of some of the tools we explored in the class.
11. Hopefully collaboration with other colleagues, perhaps other institutions as well. These new skills and knowledge will be useful in communicating with others about potential research projects. I would also like to use the knowledge to advocate for how this technology could be used at my institution and why having certain tools could be beneficial.
12. I hope to build partnerships with other institutions to apply some of the methods we discussed to analyze and better characterize some of the collections I work with to inform conservation treatment decisions and contribute to scholarship.

6) *Who might benefit the most from taking this RBS course?*

1. Those who are working in institutions that focus on research, and who have collections that need further study.
2. Someone from a larger, well-funded institution with a conservation facility and access to a good deal of equipment.
3. Curators, conservators, people who teach, and scholars.
4. Anyone with an interest in exploring physical, material objects via methods not always associated with rare books and other historical materials.
5. {private response} Conservators, medievalists, and those with large manuscript collections.
6. Anyone who wants to learn more about the techniques we discussed. Virtual demonstrations in the labs are very helpful to see how the machines looked and how they might have been used.
7. Special collections librarians, archivists, and conservation specialists.
8. Bench-trained book conservators, librarians and archivists would definitely benefit.
9. Conservators might be the most natural crowd, but I imagine that curators/librarians could benefit the most because they are less likely to have prior awareness/experience of

the subject.

10. Conservationists, curators and other people interested in doing interdisciplinary scholarship in service of increasing access to materials.
11. Conservators, art historians, librarians, archivists; anyone interested in how science and cultural heritage can intersect.
12. I imagine anyone that works with special collections in some capacity could. Anyone who wants to know more about how artifacts were made, how they will age, &c., could benefit from the course.

7) *If applicable, what were the most powerful, or otherwise noteworthy educational moments in the course? Were there any "aha!" moments you'd like to share?*

1. Seeing how the XRF scan can be broken up to highlight different elements was really impressive and inspiring.
2. {no response}
3. Each day contained these moments; I am endlessly amazed by the capacity of what these technologies can reveal. Kristen Herdman's presentation on an embroidered binding was particularly revelatory. I really enjoyed the visit to the Furniture Research Center. Despite not being book-related, it was a great way to take advantage of a resource in a nearby space, and it was interesting to hear how the methods we discussed were being used in a related cultural heritage field.
4. Learning about the "birthing girdle" and its analysis!
5. {no response}
6. The amount of things in an object that can be tested. Everything was quite new to me so I definitely had many of the "aha!" moments.
7. I especially enjoyed the time in the lab, seeing the equipment, and getting some hands-on experience. This helped me review and understand the concepts. If anything, the instructor was a great teacher due to his enthusiasm for the subject and because he encouraged questions!
8. There were "aha!" moments every day!
9. The reality of our limited resources (money, time) is inescapable. Wealthy institutions ought to be proactive in partnering with less-resourced neighbors.
10. I appreciated the expertise of my classmates as they also helped me better understand the class. I especially appreciated that RH made sure to remind us that just because it's possible doesn't mean we should use these tests all the time, keeping central that we must respect the diverse cultural practices of the communities from which many of these items originate.
11. {no response}
12. Being able to see the technology in action was very powerful and useful. Reading about it is one thing, but getting a chance to use some of the tools and see what they can do provided a much better understanding of the work involved in doing the analysis and

also interpreting results.

8) *Are there any other ways in which the course could have been improved?*

1. More talk about books!
2. Not sure how to suggest alleviating this problem. I thought the course was a little PowerPoint-lecture-heavy, which didn't work well for me as I often couldn't see the slides.
3. More hands-on activities would have been nice, although I appreciated the amount of lecture time we had, as the concepts were complex.
4. Perhaps a bit more time on the Main Campus working/examining books at the libraries there.
5. {private response}
6. If we could get the PowerPoint slides ahead of each class to make annotations on them.
7. I think it would help to provide a handout of the various forms of analysis discussed and their acronyms.
8. Not that I can think of; it was really good.
9. The lab visits were interesting but I feel like they could be condensed. Group work organized around actual physical objects could be interesting for library visit(s)—e.g., in small groups, we could examine an object, ask questions, and propose methods of analysis.
10. I know in past iterations, the class was co-taught with a book historian and I wonder how that collaboration would have added to the contextual analysis in the class.
11. {no response}
12. I can't really think of any! RH was such an engaging and enthusiastic teacher, he made the subject even more interesting. The case studies we looked at were also all really interesting and relevant.

9) *Do you feel that you got your money's worth? How likely are you to recommend this course to others?* ***On a 1–10 scale****, 1 would indicate that you disagree that you got your money's worth, 5 would indicate a neutral response, and 10 would indicate that you agree that you got your money's worth.*

1. 9
2. 5
3. 10
4. 10
5. 7
6. 10
7. 10
8. 10

9. 9
10. 8
11. 8
12. 10

10) *If your course made any (virtual) field trips outside of the classroom or had guest speakers, do you feel that they enhance the course experience?*

1. Yes! Love a good field trip and guest speaker (we did have a few that were incredible).
2. The hands-on lab time was good. I had a more difficult time seeing during lab demos.
3. I'm always happy to hear about the Books2Craft project; that work ties in so well to the topics of this course.
4. Yes! Both the field trips and guest speakers helped to add diversity to the course content.
5. Oh yes. The virtual session from the English scholars focusing on biocodicology was excellent.
6. Yes, researchers and scientists discussed their own specialty. It is helpful for me to hear from different people.
7. Absolutely. The presentation on DNA and protein testing was also fascinating. The visit to the Beinecke to handle the manuscripts was also fun.
8. Absolutely!! They were also really great!
9. The guest speakers on biocodicology were a fantastic addition, and I'm very grateful they were able to join us.
10. The guest speakers and lab sessions provided a great opportunity to see the technologies in action. Having no science background, the practical application of the theories further cemented the concepts for me. The lab spaces at Yale are like no other and serve as the ideal location for this class.
11. Yes, it was great to hear other perspectives and fascinating hearing about other kinds of research that is happening.
12. Yes, it was very helpful to hear from others working in the field or on particular methods to get other perspectives. It also enhanced the course experience to learn from a variety of experts.

11) *Do you have any additional thoughts or advice for anyone considering taking this course in a future year?*

1. Read up on the course materials and do not feel like you need to be a scientist to follow along. This class is great at explaining scientific equipment and its data for those who either haven't had a science class before or those who haven't had one in decades.
2. {no response}
3. I do wonder if there would be a way to meet remotely for a few days of lecture, and

then gather in person for labs and hands-on activities. While I always appreciate being able to connect with other people in my RBS classes, it would save money and travel, &c., to cover preliminary material over Zoom.

4. Not at this time.
5. Get ahead on the reading, even if you don't grasp it all at first!
6. I highly recommend it! RH is very good at explaining difficult scientific knowledge to people without a science background. He is open-minded and thinks about each issue in a holistic way. You can bring your own questions to him and you will get amazing professional answers. The course assistant Kristen Herdman is also very nice and has a lot of expertise on the subject as well. I also enjoyed learning from other students in the class.
7. I would hold the final day of classes at the Beinecke. We traveled to West Campus but didn't actually visit the lab.
8. Do not hesitate in applying for this course, especially if it is offered again in-person. You will be glad you did!
9. {no response}
10. This is a great opportunity to learn about an exciting field of study that may be out of your daily work but could be a new way to develop partnerships with other colleagues.
11. This class is supposed to be geared towards people without a science background but definitely having some base level knowledge of chemistry certainly helps. I recommend doing all the recommended readings beforehand, especially if you don't have a science background.
12. I would highly recommend the course if you're excited to jump into the scientific side of cultural heritage!

12) *If you had to sum up your RBS experience with a single sentence, phrase, or a haiku, what would you say?*

1. Rare Book School has been everything I expected and more—great learning opportunities in a professional setting, social networking, and bringing back lots of great tools to teach my colleagues.
2. {no response}
3. So many conferences, presentations, articles, &c. talk about "the future" of the book; often that covers digital realms. This class summed up for me a much more intriguing and exciting future, one in which we can make creative use of technologies to answer centuries-old mysteries about material culture.
4. A toast: "To new friends, new possibilities, and old books!"
5. Intensely interesting.
6. Amazing week well spent!
7. It was an educational, fun, and valuable week.
8. My RBS experience was even better than I imagined it would be!

9. The perfect way to ease any high school chemistry-induced psychic wounds.
10. Do not be afraid / Science can be for everyone / Even bookish folks
11. RBS is a great way to spend a week! You meet lots of interesting people and walk away with plenty of new knowledge and ideas.
12. Science is fun!