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**Institution:** Washington and Lee University (Department of Chemistry)

**Name of project:** Whose Culture Should Be Preserved?

**Dates of project:** September 22-26, 2008 (with follow up activities)

**Amount awarded:** \$5,000

Note that in this online version of the report, names of students and colleagues have been removed for privacy purposes. These details are reported in the version submitted for ACS files.

1. Original goals and objectives:

The 15<sup>th</sup> Triennial Convention of the International Council of Museums Committee for Conservation (ICOM-CC) was held in New Dehli, September 22-26, 2008. The world's foremost art conservators and conservation scientists discussed the cutting edge of art conservation *and* the key problems of international cultural heritage conservation, considering ethical issues and conflicts of traditional local methods versus high-tech modern methods from the West. The goal was to attend the meeting, become much more knowledgeable in these areas, and widely disseminate that knowledge.

2. If goals/objectives changed during the course of the project, please state the revised goals/objectives.

The original goals have been both modified and expanded. Because there was a time lag between notification of the award and the arrival of the funds at W&L from ACS, the cost of the airline ticket increased somewhat, but more significantly, the hotel that I intended to use filled up. This presented the choice of using cheaper hotels much further from the convention site or a more expensive hotel closer to the convention site. Based on some insight from members of our faculty who have traveled in India before, I chose the more expensive hotel from a sanitation standpoint. [It turned out, based on conversations with other meeting participants, that my questions about the sanitation conditions of some of the other hotels had merit.] Also, my decision was fortuitous from a safety and security standpoint, because one week before the meeting began, New Delhi was hit with five coordinated terrorist bomb blasts. Our hotel had 24 hour a day security and staff that checked incoming vehicles for car bombs. The day I left New Delhi, another bomb went off, and getting into the airport to leave involved significant security screening. Hence, the decision to upgrade the hotel was a good one. However, the more expensive hotel meant that the portion of the budget I intended to use to travel to other ACS schools evaporated. Nevertheless, dissemination has taken place---*vide infra*.

My experience in India also had a tremendous impact on me from the standpoint of my laboratory research in Green Chemistry. I was overwhelmed by some of the problems facing India that will impact global energy and environmental issues. The day before the conference, I visited Hamayun's tomb; the day after the conference, I visited the Taj Mahal. In many ways, those excursions were as valuable as the conference, in terms of providing a wider perspective on cultural heritage, cultural heritage conservation, and just general exposure to modern India. I have recently been given the opportunity to revise two sections of General Chemistry, and I

intend to run those two sections around the themes of energy, climate change, cultural heritage conservation, terrorism, and medicine and health; all of those topics are intimately related and I want to enhance what I already do with those topics in General Chemistry. This is something I had not planned to do before going to India.

3. In what ways were the goals/objectives met? Please give examples.

My goals were met in several ways: (1) In addition to valuable conversations with friends, colleagues, and contacts that I had previously developed, I developed over 20 new contacts, several of which have been valuable already. For instance, I had already formed a useful collaboration with a colleague in The Netherlands. In conversations with him in New Delhi, we were able to expand this internship opportunity to two students for this coming summer, and those two students have already won highly competitive W&L Woolley Fellowships for study abroad to do their summer internships with him. On another front, I have been working with one of W&L's top students who is interested in textile conservation and curatorship, and most of my contacts before the New Delhi meeting were in paintings conservation. I met several prominent objects conservators in New Delhi, and thus my student looks set to do a summer internship with one of the United States' foremost textile conservators. The student won a highly competitive W&L Johnson Leadership Fellowship to do this. Furthermore, contacts with two scientists from a prestigious art conservation program have enabled me to give good direction to a student who has become interested in the conservation of metal artifacts. (2) I accumulated 32 pages of notes at the meeting, as well as collecting the two volume collected meeting papers books. These notes and papers can be used to improve and augment my course on the technical examination of 17<sup>th</sup> century Dutch painting. My course on 17<sup>th</sup> century Dutch painting has been augmented and improved already, based on W&L's new calendar to be implemented next year. In brief, my courses in these areas are being expanded under the new system. (3) This item sort of belongs in both categories above, but based on conversations with another prominent Dutch art conservation scientist my W&L class will have a two day hands-on workshop at an important Dutch facility in 2010, which is an expansion of the opportunities that my students have had in 2007 and 2008. (4) I signed a book deal with Oxford University Press, and thus I now will definitely be producing a book on the chemistry of old master paintings, and work from this project will definitely impact the book. (5) I have a draft of a short paper for the Journal of Chemical Education completed that I intend to submit next week. (6) I have spoken about some of the work in this project in invited talks at Ursinus College and Ferrum College, and I will be giving two talks at Davidson College on April 15 and 16 involving these topics. I also gave a relevant talk as an invited speaker in an art conservation symposium at the National American Chemical Society Meeting last weekend in Salt Lake City.

4. Describe the evaluation/assessment process used. Summarize the results of this process. Include any instruments used to evaluate/assess your project.

As noted above, I have quantified the number of new contacts, student internships, notes, etc. that have been generated by this project. Talks that I have given have been well received. My classroom work with this material will really hit the ground in the fall, winter, and spring of next year.

It might be worth noting that I received this February one of twelve State Council for Higher Education of Virginia Outstanding Faculty Awards for my work over the past several years. These SCHEV OFA awards involve the 57 institutions of higher education in Virginia

each nominating a few faculty. This year, out of 102 nominees, 12 awardees were selected, and I was fortunate to be one of them. Many of the judges and referees commented on the science in art component of my portfolio.

5. If you were to redesign your project, what would you do differently and why? (What are the “lessons learned”?)

The big thing I would do differently is emphasize to ACS the time-sensitive nature of the costs of hotel and airplane expenses for a conference. Had W&L received the check within several days of notification of the award, approximately \$600-\$800 in expenses could have been saved. This did not cause me to spend more than I was awarded, but it ate up the money I could have used to do more traveling to other ACS institutions. Please note that in the two talks I have given, and the two that are upcoming at Davidson, I have only taken money for my travel expenses, I have not asked for an honorarium. If other ACS institutions would like me to visit to speak, I would be happy to do so if they can pay for my travel.

6. How did your project impact other faculty on your campus?

I have served the past several months, and will continue to serve, on the University Collections committee. In this capacity, several of us from different disciplines offer our expertise twice a month to the curators of W&L’s University Collections. This project has improved my ability to comment on these matters. In addition, I have formed a close working relationship with our curator of our East Asian export porcelain, and he and I both contributed to an NSF MRI grant proposal from W&L (spearheaded by Geology and Physics/Engineering) for a new scanning electron microscope with energy dispersive X-ray capability (vital for the examination of elemental composition of microfragments of art). Furthermore, my courses are now part of a new minor we have established at W&L in museum studies. Thus, I have very close interactions with our Art History Department and our University Curators.

7. How did the project impact the institution as a whole?

The main impact of the project will be felt next year when this material gets incorporated into my two sections of General Chemistry and into my courses on Science in Art.

8. If students were involved, what was the impact on them?

Please see my responses to #3 (*vide supra*). Most of the current impacts on students have been in the form of increased summer internship possibilities and better career advising. There will be significant student impacts next year when the various course revisions get made.

9. How have you shared the results with ACS colleagues and beyond ACS? What are your plans for dissemination?

I have two upcoming talks at Davidson, as indicated above, in April, and I have already given relevant talks, as indicated above, at Ferrum and Ursinus. I also gave a relevant talk as an invited speaker in an art conservation symposium at the National American Chemical Society Meeting last weekend in Salt Lake City.

My plans for dissemination involve submitting a short opinion paper to the Journal of Chemical Education. My dissemination plans include incorporating this material into my book for Oxford University Press. I have contributed to the NSF CWCS Chemistry in Art Workshop the past four years (and hosted it last year), and I will be contributing to it again this year (in

June at Millersville University), and I will incorporate results from this project in those presentations. I also intend to keep incorporating this material in future seminars given off campus.

10. What are the next steps (follow-up) in your project?

- (i) I am headed to Davidson to give two talks on April 15 and 16.
- (ii) I received my fourth W&L Class of '65 Excellence in Teaching Award to fund some of this ongoing work---one example is that I will be attending the American Institute of Conservation (AIC) national meeting in Los Angeles May 19-22 entitled "Conservation 2.0---New Directions". Class of '65 money will also be funding (iii) and (iv) below.
- (iii) I will be attending a pre-AIC meeting workshop on Panel Painting Conservation at the J.Paul Getty Museum May 17-18.
- (iv) I will be doing research in the Getty conservation archives (following up on work I did there in 2006) on May 13-14.
- (v) I will be helping with the NSF CWCS Chemistry in Art Workshop in June.
- (vi) I will be attending the NSF CWCS Advanced Chemistry in Art Workshop in the last week of June.
- (vii) I will be doing significant book writing this summer.
- (viii) I will be attending the Conservation of Old Master Paintings meeting at the National Gallery of Art in London in September.
- (ix) I will be revising my courses in General Chemistry and Science in Art during the next academic year's fall, winter, and spring terms.

11. Financial statement

12. Please include a summary of your work that may be included on the ACS Faculty Renewal website.

I visited India during the third week of September, 2008, to attend the 15<sup>th</sup> Triennial Convention of the International Council of Museums Committee for Conservation (ICOM-CC) that was held in New Dehli. The world's foremost art conservators and conservation scientists discussed the cutting edge of art conservation *and* the key problems of international cultural heritage conservation, considering ethical issues and conflicts of traditional local methods versus high-tech modern methods from the West. In addition to valuable conversations with friends, colleagues, and contacts that I had previously developed, I developed over 20 new contacts, several of which have been valuable already. For instance, I have been able to expand pre-existing internship opportunities for Washington and Lee students in The Netherlands and I was able to develop a new summer internship opportunity for W&L students at a major art conservation laboratory in the United States. Furthermore, new contacts with conservation scientists at the meeting have enabled me to provide good career advice to a W&L student interested in the conservation of metal objects. I accumulated 32 pages of notes at the meeting, as well as collecting the two volume collected meeting papers books. These notes and papers will be used to improve and augment my course on the technical examination of 17<sup>th</sup> century Dutch painting. My course on 17<sup>th</sup> century Dutch painting has been augmented and improved already, based on W&L's new calendar to be implemented next year. In brief, my courses in these areas are being expanded under the new system. Based on conversations in New Delhi, my 2010 students in The Netherlands will have expanded hands-on workshop opportunities at a major

conservation training center. I signed a book deal with Oxford University Press, and thus I now will definitely be producing a book on the chemistry of old master paintings, and work from this project will definitely impact the book. I have a draft of a short paper for the Journal of Chemical Education completed that I intend to submit next week. I have spoken about some of the work in this project in invited talks at Ursinus College and Ferrum College, and I will be giving two talks at Davidson College on April 15 and 16 involving these topics. I also gave a relevant talk as an invited speaker in an art conservation symposium at the National American Chemical Society Meeting last weekend in Salt Lake City.

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