APA Small Grant Report: Philosophy of Science in the Practice of Science Communication: Inaugural Workshop of the Philosophy of Science Communication Network

Organized by Lynn Chiu, Sophie Veigl, and Rebecca Hardesty
Report written by Lynn Chiu

1. The original plan—an inaugural workshop

We, the founding members of the Philosophy of Science Communication Network, received a small grant from the APA to host an inaugural workshop that will connect philosophers and science communicators across continents. The plan was to organize a “hybrid” workshop that combined in-person engagement with online, cross-cultural, and cross-disciplinary interactions. Having both online and in-person components was key—our intention was to create a sustainable model of conferencing that can reduce the carbon footprint of flying without sacrificing personal interactions. By keeping the on-site meetings “local” while engaging with “global” participants, we could test whether a “glocal” approach can combine the best of both worlds. Another key feature of our workshop was to pay professional science communicators for their contribution and time to an academic event. We thus organized our budget accordingly. Rebecca Hardesty and UCSD was our fiscal agent.

Our workshop consists of two nodes. In the original plan, Rebecca Hardesty will manage the San Diego “node” in collaboration with the Teaching + Learning Commons at University of San Diego while Lynn Chiu and Sophie Veigl will organize the Vienna “node” in collaboration with the Konrad Lorenz Institute at Klosterneuburg, Austria (an old town outside of Vienna).

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Had the workshop moved forward, we would have had two separate but interconnected workshop “days” at UCSD (April 16th-17th, 2020) and Vienna (May 9th, 2020), respectively. The two workshop “days” would be connected by online activities designed to bring the two groups together as cross-cultural learning buddies (the outline of these programs are in the appendix). This “glocal” method was inspired by the scientific director of the KLI Guido Caniglia, whom we collaborated with at the Vienna node. Lynn and Sophie met with him to discuss how we can apply his ideas and experiences to our workshop.

Feb 2. Meeting with Guido Caniglia on the Glocal Curriculum

Feb 17. Zoom meeting to discuss program

Globally, we invited two keynote speakers to develop a “flipped format” interactive talk, that is, each “talk” will be spliced into multiple 5-10 minutes sections to enable discussions and activities in between. One talk would’ve been in philosophy of science and public engagement—by Angela Potochnik (Cincinnati), the other in the social sciences of science communication (specializing in
science games and poetry)—from Sam Illingworth (previously Manchester, now Western Australia). Angela was invited to talk about the deficit model from a philosophical perspective, the role of philosophers of science in the science communication landscape, and the public engagement center at Cincinnati. Sam would’ve talked about evidence-based public engagement and science education through games in an interactive webinar.

**A Flipped Format: dynamic, engaging virtual keynotes**

Locally, each node is supposed to focus on their local strengths. The San Diego program, designed by Rebecca, was designed to critically address the use of games in science pedagogy and communication. The Vienna node would’ve brought academics at University of Vienna together with professional science communicators for theoretical discussions, practical tutorials, and the presentation of seed ideas for philosophy of science communication.

**An Interactive Workshop to build Expert Networks & Collaborators, Skills, & Maps of the Scicomm Landscape**

In addition to our own activities, we were fortunate to have recruited Melissa Jacquart as a Network member shortly before the workshop. Coincidentally, she had also planned to organize
a philosophy of science and science communication workshop for the Center for Public Engagement at University of Cincinnati in May. We began to discuss how we could synergize our efforts to jointly promote an ecosystem of philosophy of science in science communication (and vice versa).

Unfortunately, we had to cancel the workshop, which we will explain below. A participant list and schedule of the cancelled workshop will be included at the end of this report as an Appendix. (Unfortunately for the emerging community of philosophy of science communication, Melissa’s workshop had to be cancelled as well.)

2. The pandemic and how we adapted
As the COVID-19 pandemic swept across the globe, we were forced to cancel the workshop for several reasons: (1) Lockdowns in both cities meant we could no longer carry out the in-person component, yet it is an essential feature of the workshop. (2) The UCSD Teaching Commons had to devote their staff and resources to supporting online teaching demands. This meant we could not organize or carry out the UCSD component of the workshop. (3) We each had increased demands or limitations. Some of us started to volunteer our time and efforts to help fight the pandemic, others were helping their campus move teaching and meetings online, some of us fell terribly ill (eventually for several months). We were all also in a transition and precarious period of our careers. Finally, (4) we also anticipated that many workshop participants would not have the time to develop new materials for the workshop.

It became clear that it would be overly ambitious to try to organize the workshop as planned. It was also painfully clear that we could not defer to the next year. Before the pandemic struck, we were already operating under a tight time constraint. We could only organize and host the workshop before June, as we each had commitments and career changes that would require us to leave our universities, states, or countries thereafter. So, our options were to either cancel our plans and return the grant or try to move forward with an alternative proposal that can fulfill our original vision and mission. We chose the latter.
The first alternative idea was to organize a proposal competition for philosophers and science communicators, with the grant money as starting funds. We would create a website to be populated with interesting ideas about combining the practice of science communication and engagement with the philosophy of science. This idea was originally approved by Linda Nuoffer (APA), yet given the realities of the pandemic and the decreasing work capacity of the organizers, however, we (in particular, Lynn) soon decided that the work involved in hosting a competition was still unrealistic.

We eventually decided on a different format, which also received the green light from Linda. We will use our funds to host an interview series. Conducting interviews would not only enable us to get an in-dept understanding of where our interviewees stand in relation to philosophy and the practice of public engagement/science communication, but also uncover how theoretical work in philosophy of science can engage with—or are already present in-- the practice of communicating science for understanding. Furthermore, this was something we have already started to do. Before the workshop, we have already interviewed Henk de Regt and Elizabeth Hannon. We also had a short Q&A interview with Sam Illingworth published. An interview series would make good use of our current experience and know-how. It could also be distributed across a longer time frame, allowing us to tackle it under less stressful external and health constraints.

3. The alternative proposal—a website and interview series
Table 1 summarizes the interview plan and current progress.

Table 1. Interview Plan

<table>
<thead>
<tr>
<th>Name</th>
<th>Profession</th>
<th>Interviewer</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Angela Potochnik &amp; Melissa Jacquart</td>
<td>Philosophers</td>
<td>Sophie</td>
<td>Conducted</td>
</tr>
<tr>
<td>2 Michael Weisberg</td>
<td>Philosopher</td>
<td>Rebecca</td>
<td>Conducted</td>
</tr>
<tr>
<td>3 Orsoyla Molnar</td>
<td>Biologist</td>
<td>Sophie</td>
<td>Conducted</td>
</tr>
<tr>
<td>4 Udo Fon</td>
<td>Science Communicator</td>
<td>Sophie</td>
<td>Conducted</td>
</tr>
<tr>
<td>5 Nina Blazejovsky Tatjana Gram-Krebs</td>
<td>Science Communicator</td>
<td>Sophie</td>
<td>Conducted</td>
</tr>
<tr>
<td>6 Rene Schröder</td>
<td>Biochemist</td>
<td>Sophie</td>
<td>Conducted</td>
</tr>
<tr>
<td>7 Martin Kusch</td>
<td>Philosopher</td>
<td>Lynn</td>
<td>Pending</td>
</tr>
<tr>
<td>8 Magdalena Steinruetch</td>
<td>Science Communicator</td>
<td>Lynn</td>
<td>Pending</td>
</tr>
<tr>
<td>9 Lydia Patton</td>
<td>Philosopher</td>
<td>Lynn</td>
<td>Pending</td>
</tr>
<tr>
<td>11 Nigel Warburton</td>
<td>Popular philosopher</td>
<td>Lynn</td>
<td>Conducted</td>
</tr>
</tbody>
</table>

The interviews are/were conducted by Sophie, Lynn, and Rebecca in a semi-structured format with ten starting questions. We then recorded the one-hour sessions with our interviewees and had them professionally transcribed by transcription service REV.com. After processing and
editing the interviews, we plan to **host** the interviews on a website hosted on G-Suites with the domain name *philscicomm.com*. Finally, we will have a launch and release plan to **distribute** the interviews via social media tools (Tweepsmap)—in particular, to the audience of the growing Philosophy of Science Communication Twitter handle @philofscicomm. We plan to complete the interviews by the end of the year 2020 and start distributing them either before or after the winter holidays, depending on our workload and career developments.

**4. Finances**

Based on the interview plan just described, we reorganized our expenses as follows. They are summarized in Table 2.

- **WORKSHOP**: We return all workshop related expenses to the APA. These were:
  - Workshop proceedings 450 USD
  - Workshop supplies 50 USD
  - Workshop advertisement 50 USD
  - Zoom subscription 322 USD
- **SPEAKERS**: We redirected 75% of our speaker honorarium to the costs of transcribing the interviews with the online service “REV” (*REV.com*)
  - Honorarium (1000 USD) → 10 hours of transcriptions on REV (750 USD)
- **WEBSITE**: We made good use of the website fees. Originally, we planned to host our website on Wordpress. Given the lack of time and fees to pay an external designer to help us set up a site from scratch, we instead opted for a G-suite subscription to host a domain name (philscicomm.com) and host our website.
  - Wordpress (96 USD) → G-suite domain name, registration, design/maintenance, hosting (96 USD)
- **SOCIAL MEDIA**: We found a way to get a 50% discount on social media tools.
  - Original budget for TweepsMap (180 USD) → actual expense (84 USD)

In sum, our expenses are as below (Table 2):

<table>
<thead>
<tr>
<th>Items</th>
<th>Original budget</th>
<th>Items</th>
<th>Actual expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workshop</td>
<td>550</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Zoom</td>
<td>322</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Honorarium</td>
<td>1000</td>
<td>REV</td>
<td>750</td>
</tr>
<tr>
<td>Wordpress</td>
<td>96</td>
<td>G-suite</td>
<td>96</td>
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<tr>
<td>TweepsMap</td>
<td>180</td>
<td>TweepsMap</td>
<td>84</td>
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<tr>
<td><strong>BUDGET</strong></td>
<td><strong>$2148</strong></td>
<td><strong>ACTUAL EXPENSES</strong></td>
<td><strong>$930</strong></td>
</tr>
</tbody>
</table>
We should return 2148-930 = $1218 to the APA. The fiscal agent UCSD, however, set aside a check to return $1159.67 to the APA. It is unclear why there is a discrepancy between the two and we are still investigating the matter with UCSD.

5. What we learned – personal reflections
Personally, my (Lynn) tradition is to include personal reflections in my grant, fellowship, and work reports. Some of the co-organizers on the project followed suit.

Lynn: PhiloSciComm was created with the ideal that we are not only bridging a much-needed gap between two important areas of work, but also that we, as practitioners and philosophers ourselves, need a community to scaffold the growth of our trajectory (as well as that of others in similar positions). I’ve come to realize that a project of this ambition and scope is extremely difficult for early-career scholars to pull off while in precarious situations without institutional support. Even more daring was the attempt to achieve this while being philosophers with businesses or academic adjacent careers in areas related to science communication. The pandemic was a heavy blow on us, but I am still very thankful that the APA recognized and was willing to support the launch of a group and project dedicated to bridging science communication with philosophy of science. Hopefully, the APA will continue to support risky projects from the precariat.

Rebecca: I recognized how interconnected the academic community is, despite the tendency of us in the humanities and social sciences to isolate and view each other as competitors as opposed to colleagues. This community as a whole suffers when many of its members face illness, unstable employment, or social injustice. The experience of working with this team illuminated how important it is to support the most vulnerable in the academic community, especially during times of hardship. Specifically, this experience taught me that there is a need within the humanities, specifically philosophy, to support early career researchers and promote the legitimacy of pursuing alt-ac careers.

6. Appendix

The San Diego Program

Goals: Participants will . . .
- Review current research on games for learning
- Be able to identify & explain game design principles and mechanic types
- Practice adapting existing games for classroom purposes
- Practice implementing principles and mechanics in existing lessons/content
- Begin developing/adapting a game suited to their particular teaching context
- Establish a community of instructional game users & designers at UC San Diego
• Same but with Vienna

Advance work:
• Prep slides
• Collect games for play during workshop (and breaks)
• Handouts & supplies
• Prep game demos
• Recruit facilitators
• Advertising/communication - succinct examples for marketing

Webinar/Screencast

1. Why care about games?
2. Deficit Model in education and how games can address it

Day 1
1. Icebreaker/Introductions - Initials + Role/Task Cards (~20 min)
2. Workshop outline and LOs (~10 min)
3. Introduction to game design principles and mechanics + outcome-based learning/teaching primer (~30 min)
4. Adapting tabletop games for classroom use (~60 min)
   a. Group play period ~15-30 min
   b. Group adaptation exercise ~15 min
   c. Debrief/report out ~15 min
5. Break - snacks/lunch, games, raffle (~30-45min)
6. Gamifying lessons (~ 60min)
   a. Introduction to gamifying lessons ~15 min
   b. Sample gamified lessons ~15 min
   c. Gamifying sample lessons ~30 min

7. Games to educate outside of the classroom Part 1
   a. Why this could benefit instructors and students
   b. Sam Illingworth activity (check and see if possible)
   c. Involving the public/general audiences in educational STEM games
8. Homework
   a. revisit an activity or part of a lesson you’ve used/plan to use & gamify it using the mechanics or infrastructure of your choice
   b. if it’s playable and there’s interest, we’ll offer space, if not time, at the end of Day 2 to test it out

Day 2
1. Warm-up - group Game Design Sprint (~25 min)
2. Brief recap of design principles & mechanics (~15 min)
3. Gamifying Lessons, pt 2 (~45-60)
   a. Sharing out (~5 min/participant?)
   b. Collective debrief - emphasis on principles, mechanics, and future development feedback (~40-55)
4. Digital Games (~60-90min) Introduction to digital games (~10 min)
   a. Twine demo (~20 min)
   b. Class Twine practice (~20-40 min)
5. Games to educate outside of the classroom Part 2 (either before or after “Digital Games” depending on whether the below are on Twine)
   a. Games for equity-based science education
   b. Games for social justice
   c. Games to reach across ideological divides
6. Break - snacks/lunch, raffle (~15 min)
7. Game buffet/Smorgasbo(a)rd (~60-90 min?)
   demos/descriptions/materials for attendees to cycle through
   [facilitators needed for each station]
1. Workshop recap, resource reminders, & announce future development/playtest opportunities (~10-15min)

The Vienna Program

First half: Theory meets Practice (5 hours including breaks)

1 hour  Bringing academic STS into scicomm work and research -- Ulrike
   • intro lecture
   • activity: case study

30 mins The scicomm landscape (the science center network) -- Barbara
   • intro lecture
   • challenges of bringing theory into practice

2 hours Mapping activity: together with Ulrike, Barbara, Tarja, Martin, Orsolya
   • first small groups
   • then together

Second half: Tutorials and Games

30 mins max each Tutorials
1) Institutional scicomm to build interdisciplinary communities -- Lynn & Katrina
I wonder whether we could do a local panel here? Anyways, (almost 100% confirmed) participants are:

- Udo Fon - producer Austrian Academy of Science
- Matthias Gil - graphic design, digital strategist, Science Design Hub
- Nina Blazejovsky & Tatjana Gram-Krebs - graphic design and PR for pharma/health clients
- Bertram Schuetz - science.co founder

20 mins max each Pilot/Teaser Presentations of PhilofSciComm work 1) -- possibly Henk?

Outcomes:

- how to do your own group/community activity?
- recordings of the intro bits

Vienna participants (?) indicates to be confirmed)

- STS: Ulrike Felt, Sarah Davies (?)
- Philosophy of Science: Tarja Knuuttila, Martin Kusch, Natalia Carrillo-Escalera, Henk de Regt (?)
- History of Science: Hanna (?)
- Evolution & scicommm for disease prevention: Orsolya Molnar
- Science Center Network: Barbara Streicher
- Austrian Academy of Science, producer: Udo Fon
- Graphic design, digital strategist, Science Design Hub: Matthias Gil
- Graphic design and PR for pharma/health clients: Nina Blazejovsky & Tatjana Gram-Krebs
- Science.co founder: Bertram Schuetz
- IST science communicator: Magdalena Steinruck
- IIASA science communication fellowship program: Ansa Heyl (?)
- Science/medical writing: Katrina Falkenberg (virtual)
- KLI fellows (?)

Connecting the Hubs

- Lessons flow from San Diego to Vienna Hub
- Map project in small groups and for big group discussions: a) science communication ideas, b) disciplinary backgrounds, c) local concerns, d) global concerns, e) sources of funding, f) scientific issues, g) personal factors

1. Create an online discussion group after the SD hub iteration has finished to promote future dialogue. We are also prepared to host a more informal follow-up in June and hold weekly “chats” in-between to discuss any science communication or science education projects that emerge out of the work we do in the workshop.
2. Need hashtag + social media handles
3. Three takeaways (post publicly): people learn very different lessons & can share them [also a measurement, indicator for success]

4. Surveys for pairing & interviews

5. Continue the workshop as a movement by releasing any talks/videos/keynotes/resources that emerge out of the work we are doing to create workshop content for the Vienna hub.

6. Emphasize the value of attending physically and virtually both hub workshops:
   1. Having a different way of experiencing the same activities to emphasize what accommodations need to be made to create inclusive and equitable science communication experiences.
   2. (Potentially) experience different activities and content.
   3. Depending on participation, we could even pair or group people up online to become micro-scicomm hubs, so they would come away with new local and extended communities.

7. Make a webinar prior to the workshop to get some theoretical setup out of the way and to also promote what we are doing.