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Applied evolutionary education: the benefits and costs of hosting regional evolution conferences

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Abstract

Regional academic conferences provide a variety of benefits to attendants, but hosting them can be costly. Here, we share benefits and drawbacks of hosting regional evolution meetings from the vantages of a tenured associate professor, a tenure-track assistant professor, and a doctoral student. We use experiences of hosting the NorthEastern Evolutionary Psychology Society (NEEPS), the Southeastern Evolutionary Perspectives Society (SEEPS), and the Mid-Atlantic Bioanthropology Interest Group (MABIG) as cases to address the benefits and costs. We highlight what are likely universal benefits and costs of hosting evolution conferences while also discussing the risks of excess service to women and underrepresented faculty members. We also draw attention to personal and circumstantial contingencies that evolution conference hosts may encounter.

Keywords: Evolution education, Evolutionary research, Academic service, Regional conferences

Introduction

Conferences are important to the lifeblood of any discipline, as they enable researchers to share what they have done; get new ideas; find students, collaborators, and mentors; and engage the public about findings important to everyone. However, despite this seeming embarrassment of educational riches, most conferences are too far away, expensive, or specialized to benefit many academics. Larger conferences, such as those for flagship professional organizations, are frequently too big for students or people new to a discipline, who can get lost in the shuffle. Moreover, big national or international conferences may be overly general, making it hard to find a niche of likeminded scholars. Furthermore, even academics in well-funded departments can typically afford to go to only a few society meetings per year.

Given these tensions, we propose that hosting regional evolution conferences is a means to (1) improve local evolution education efforts and (2) integrate evolution research and teaching with service in ways that enhance individual careers regardless of career status. Hosting conferences complements the ethos of public engagement, which has been the mission of the American Association for the Advancement of Science since its inception and the “intellectual merit” and “broader impacts” cornerstones of the US National Science Foundation. We argue that hosting and attending a variety of relevant conferences should therefore be supported.

Over the last few decades, regional conferences have emerged as variants of larger national or international conferences and can provide numerous benefits. Regional conferences are closer for locals and much less expensive. They also tend to be smaller in size and provide more collaborative and intimate settings for presenting and reflecting on current research. At regional conferences attendees gain opportunities to connect with more local scholars, potential collaborators, and prospective students. These connections may be among people whose

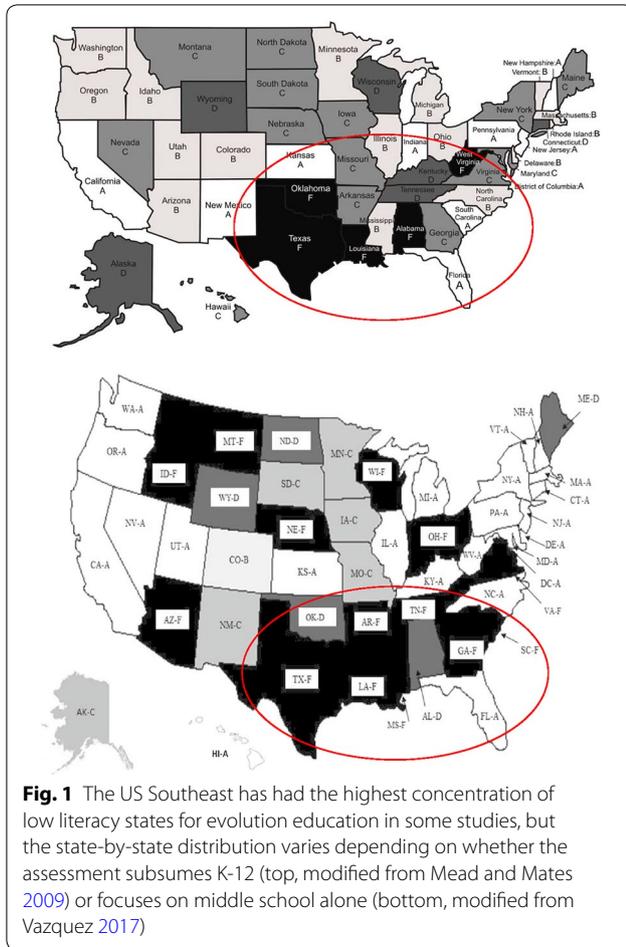
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disciplinary similarities are relatively coarse-grained (e.g., anthropology, biology, and journalism) but with broader shared interests in outreach and education.

Regional evolution conferences also provide important local opportunities for supporting K-12 evolution education efforts. The southern United States is infamous for anti-evolution sentiments and cultural resistance to evolution education (Numbers and Stephens 2017; Cofré 2019). However, this region is neither uniformly problematic for evolution educators nor is it necessarily uniquely afflicted. For example, the US South and Southeast have repeatedly fared poorly in studies of evolution literacy. In a 2009 study of state-level K-12 evolution education, Alabama, Louisiana, Oklahoma, Texas, and West Virginia were the only US states to receive failing grades (Fig. 1) (Mead and Mates 2009). However, a study focused specifically on middle school (Vazquez 2017) confirms that the Southeastern US has a greater concentration of low evolution literacy than other regions, but the geographic distribution of low-performing middle school education is considerably different than that of

the larger K-12 study. Furthermore, a more recent study of equality in evolution knowledge and misconceptions among US middle and high school students finds other regional patterning. There were no differences by gender or ethnicity, but high school students from the US Midwest fared worse than those from other regions whereas among middle school students, those from the Midwest, West, and South were more likely to have lower evolution literacy (Miller-Friedmann et al. 2019).

In fact, improving evolution education and reducing misconceptions about evolution is a global problem (Deniz and Borgerding 2018). Despite this universality, US public schools are controlled locally by states, cities, and counties. Furthermore, the historical contexts of those entities—especially in the South—mean that such problems cannot be addressed globally, nationally, or even by region (Fairclough 2016). Evolution education must be approached school district by school district, school by school, or even teacher by teacher. Regional conferences can provide easier and more affordable access to resources for local teachers in areas that are especially challenged in terms of evolutionary literacy. Regional conferences provide “bottom-up” venues for scientists and teachers to form the types of personal relationships more likely to effect changes in opinions and approaches than “top-down”-only initiatives (Fullan 1994).

Along with the greater access for undergraduates, early graduate students, and other local students and teachers is the potential local conferences afford for low-stakes experimentation. For example, at one local conference, Lynn wore a GoPro video camera while hosting and introducing the speakers from various disciplines and education settings. The goal was to set a tone that was accessible for all levels while documenting the conference for future multimedia development. Though the footage from the GoPro was of such poor quality that it was ultimately unusable, it provided information for future improvements and achieved the goal and creating a relaxing environment for attendees. A more successful innovation occurred when a program committee member at the same conference introduced “PowerPoint Roulette.”¹ For this activity, volunteers give improvisational talks using slides created for the activity that presenters have never seen before. Audience members generate absurd titles to shape how the volunteers must present their slides. This was a highlight of the conference and spread to subsequent meetings of this and other organizations

¹ The committee member did not develop the game. It also goes by the name PowerPoint Karaoke or PowerPoint Battledecks, and instructions and examples can be found online (e.g., <https://www.powerpointkaraoke.com/>).

and can be tailored to the conference topic to make it both fun and scientifically relevant.

However, given their smaller sizes, more targeted approaches, and lower relative attendance, regional conferences present considerable costs. Downsides include high workloads for hosts, which extend from the mundane logistics of arranging a venue to philosophical problems associated with who to invite, accept, or deny for a presentation spot. For instance, there can be a perceived need to accept virtually all submissions to both ensure robust attendance to cover costs at a current conference or to avoid discouraging future participation. On the other hand, this approach can result in lower quality in the overall conference and problems with rigor due to lacking or poor peer review. In needing to choose just a few conferences to attend per year, some presenters would rather attend larger conferences where their work is visible to a higher number of prominent or relevant peers. Furthermore, regional conferences specific to a discipline- or sub-discipline may be overspecialized for a local market, whereas interdisciplinary conferences may be too general to communicate with desired depth and across disciplines.

Why do unrewarded work?

The question we address in this paper, therefore, is why conduct applied evolution education and hazard the costs? One reason is that academic positions include expectations that service to one's department or program, school or college, university, community, and discipline. These expectations are usually associated with promotion and tenure or other forms of advancement at colleges and universities but tend to lack clarity or to be associated with committee work that many consider a burden at least or necessary evil at best. Service can be a chore that some do to fulfill a minimum threshold of obligation. Some tenure-track positions, for instance, calculate workload using an algorithm such that 20% of an employee's time should be to service, and the remaining 80% to research and teaching. Different types of institutions have other expectations regarding the employees' time, but few structure service expectations in ways that complement research and teaching or capitalize on the interests and talents of their employees.

Junior faculty and students may be discouraged from engaging in service activities because research is valued more highly in hiring and tenure decisions. In fact, departments and colleges frequently place moratoriums on service for students or new faculty while they establish their research. Yet, hosting conferences can be a rewarding service endeavor for such academics that dovetails nicely with the research and teaching obligations of the tenure-track process. But tenure-track scholars are not

the only people who can benefit from hosting evolution conferences. Students are also expected to engage in outreach in ways not directly tied to research production, such as through departmental or the research lab "public engagement" activities required by granting agencies. Organizing or assisting with conference organization is the kind of service that can help students internalize the lesson that teaching and research link together; in other words, this effort is an important broader impact of our work.

Case studies of three regional evolution conferences

To explore this form of applied evolutionary education, we present descriptions and experiences of three regional evolution conferences: NorthEastern Evolutionary Psychology Society (NEEPS), Southeastern Evolutionary Perspectives Society (SEEPS), and the Mid-Atlantic Bio-anthropology Interest Group (MABIG). Guitar co-hosted the 11th annual NEEPS conference, Lynn the first and second annual SEEPS conferences, and Rector all five MABIG conferences to date. At the time of the conferences, Guitar was a doctoral student, Lynn a tenured associate professor, and Rector a tenure-track assistant professor.

How these regional evolution conferences developed

NEEPS and SEEPS can be traced distantly to the Human Behavior and Evolution Society (HBES). In the early 1980s, a number of human evolution scholars from Northwestern University and the University of Michigan began informal, alternating meetings at their institutions. These meetings were eventually centered at Michigan with funding from the Evolution and Human Behavior Center there. McMaster University scholars became regularly involved, the group formally became HBES, and together held the first conference (Kuhle and Salmon 2020).

Inspired by HBES, SUNY New Paltz evolutionary psychologist Glenn Geher started NEEPS in 2007 amidst a groundswell of evolutionary psychology research and efforts in the Northeastern US. Through a shared vision of early career professionals, it developed, in part, as a means to establish networks. Rose Sokol-Chang and Sarah Strout, for instance, started the *Journal of Social, Evolutionary, and Cultural Psychology* (now *Evolutionary Behavioral Sciences*), which became formally affiliated with NEEPS. Later as editor at American Psychological Association, Sokol-Chang contracted the journal and income from journal subscriptions continue to support the society.

NEEPS in turn inspired the genesis of the Feminist Evolutionary Perspectives Society (FEPS), Applied

Evolutionary Psychology Society (AEPS), Kids Evolutionary Perspectives Society (KEPS), and SEEPS. FEPS was co-founded in 2009 in response to a lack of research examining women's active role in evolution and an overabundance of studies focused on women's mate attractiveness (Sokol-Chang and Fisher 2013). Since its inception, FEPS has collaborated extensively with NEEPS through workshops, special issues, and panels.

Concurrent with these developments, the Evolutionary Studies (EvoS) Consortium and related academic programs were initiated in the State University of New York (SUNY) system (Glass et al. 2014). David Sloan Wilson began EvoS at Binghamton University based on his book and course *Evolution for Everyone* (Wilson 2005, 2007; O'Brien et al. 2009), and Geher quickly developed a minor in EvoS at SUNY New Paltz. In 2008, Wilson and Geher received a National Science Foundation grant to expand the EvoS model to universities internationally. EvoS programs range from those with faculty interest groups dedicated to evolution research and teaching up to structured minor programs of study.

Lynn started SEEPS in 2016 at the University of Alabama (UA). He had served on the first NEEPS program committee as a graduate student at the University at Albany (SUNY) and later as a member of the New Paltz EvoS Executive Committee while at SUNY New Paltz. Lynn brought the EvoS model to the University of Alabama in 2011 (Spaulding et al. 2014). SEEPS built upon Darwin Day events started in 2013, expanding the half-day mini-conference hosted by the UA EvoS Club to a 2-day regional conference (Howells et al. 2017).

The Mid-Atlantic Bioanthropology Interest Group (MABIG) was founded in 2014 by Rector (Virginia Commonwealth University; VCU) and Kristi Lewton (then at Boston University, now at University of Southern California). MABIG was modeled after similar regional societies such as the Midwest Primate Interest Group. As the primary organizer and host of MABIG, Rector put a call out for papers for the first meeting to be held in October of 2014 without expecting much interest. The first year there were 37 presentations with attendees from nine different states. In 2015, MABIG grew to 40 scientists from more than fifteen institutions and in 2016 included a workshop on 3-D photogrammetry applications for anthropological study. VCU and Rector have continued to host MABIG every fall and in some years receive support from the VCU College of Humanities and Sciences.

Outreach, public engagement, and evolution education have remained key goals of each organization and meeting. The format of these endeavors varies, but public science lectures, workshops for teachers, and workshops for students are all effective ways to provide links between scientists and the public.

How these regional evolution conferences were hosted

Successful conferences are not hosted by individuals new to academia. But what experience do hosts need to acquire before hosting both effective and beneficial conferences? Guitar and cohost Laura Johnsen hosted the 11th annual NEEPS conference as doctoral students in anthropology and were very familiar with the organization, its members, and evolutionary studies in the region. As members of Geher's lab and EvoS students at New Paltz, Guitar and Johnsen received unique insights into the experience of managing, hosting, and attending multiple conferences. NEEPS invited students to attend business meetings, allowing them to observe how the organization functions administratively. By the time they hosted NEEPS in 2017, the two students had organized several FEPS workshops and had developed critical relationships within their department and established the credibility and perspicacity to host a conference while completing degree requirements.

One of NEEPS' primary goals has been to provide a collaborative venue for scholars interested in evolutionary approaches to human behavior. Attendees to NEEPS' annual conference come from diverse academic backgrounds including psychology, anthropology, biology, sociology, literary studies, and more. NEEPS has always had a strong focus on providing undergraduate and graduate students with a welcoming environment to present and discover new research. Since it can often be difficult for small regional conferences to find people willing to devote the time and effort necessary to host, graduate students are likely to have opportunities to contribute.

NEEPS is typically hosted on a university campus, which can eliminate or reduce the cost of renting facilities if the event is sponsored by a department. Moreover, some NEEPS conferences have taken place over the summer, which enables conference attendees to stay at reduced prices in dormitories with minimal transportation costs. Students can also volunteer in exchange for free registration, which increases the feasibility of attending NEEPS conferences. For example, several of Guitar's undergraduate research assistants were able to present at the conference at no cost.

A benefit of hosting a conference as a graduate student is the potential student-specific funding opportunities within the university that are set aside for hosting large-scale events. In the case of NEEPS, Guitar and Johnsen were able to secure funding through mechanisms like the Binghamton University Conference Allocation and Funding endowment and the Graduate Student Organization to offset the cost of catering, speaker travel expenses, and conference memorabilia.

For Lynn, the idea to start SEEPS came largely from the experience of serving on the first NEEPS program

committee. Lynn further established the institutional network to start SEEPS through his sustained efforts in founding and directing an Evolutionary Studies program at UA in conjunction with Leslie Rissler (Spaulding et al. 2014). Rissler had conducted a large-scale study of evolution acceptance at UA and helped sell UA administrators on the critical need for formalized work on evolution education in the region (Rissler et al. 2014). Importantly, however, obtaining tenure allowed Lynn to dedicate his time to service with support from his institution.

The goal of SEEPS was to promote evolution research, education, and outreach for the Southeastern region of the US. SEEPS was neither exclusive to the Southeast in membership nor does it restrict topics to the Southeast. However, many of the states in the US Southeast, including Alabama, Louisiana, Oklahoma, West Virginia, and Texas, have fared poorly in national studies of evolution education (Mead and Mates 2009; Vazquez 2017). Thus, while research is typically the primary focus of many scholarly associations, especially those focused on evolution and anthropology (the discipline of all three authors), SEEPS tried to achieve more balance with teaching and education efforts from its beginning.

A small grant from HBES was obtained in 2014 to assist with hosting the first SEEPS meeting at UA, and planning for the conference began at a 2015 Darwin Day Colloquium (Howells et al. 2017). The call for proposals from the program committee was sent during the summer with little success. The deadline was extended, and a more direct, concerted effort yielded ~35 proposals for talks, posters, and workshops. Grant funds were used to pay an honorarium, travel, and accommodation expenses to invite evolutionary anthropologist Dean Falk to be the first SEEPS keynote speaker. EvoS undergraduates helped with much of the organization, from catering to creating the program and nametags. Table 1 outlines a checklist that can be adapted to most academic conference planning situations to streamline this process for faculty and students.

Rector and Lewton had no experience organizing conferences to prepare for MABIG, but they were both deeply involved with the Biological Anthropology Women's Mentoring Network (BAWMN), a service unit of the American Association of Physical Anthropologists (AAPA).² As previous chairs and co-chairs of the

BAWMN Executive Committee, Rector and Lewton had organized and helped facilitate large luncheons and mentoring activities for women at several annual AAPA meetings. These experiences provided background in collaborating and inviting scientists to discuss their research and career trajectories. More importantly, discussions at these luncheons cemented the need for access to continuous mentorship throughout the year. While there was some initial support from senior members of the biological anthropology community, the first MABIG announcements and calls for submission were authored by assistant professors with relatively small networks of colleagues and collaborators in the region.

MABIG was established with the goal of developing a group of faculty, professionals, graduate, and undergraduate students in biological anthropology from all types of research and learning institutions to foster communication and interaction across the US Mid-Atlantic region. The group was formed with the purposes of hosting an informal, regional conference each year and mentoring of students and junior academics. One of the goals of MABIG from the beginning was to promote collegiality and connections between scientists from different academic areas.

The organization of MABIG remains grassroots; there are no bylaws or elected officials. Each meeting ends with a group discussion of ideas and goals for the organization's future. All program and meeting logistics are handled almost exclusively by Rector, and meetings are always hosted at centrally-located VCU in Richmond, Virginia. This model works well for an informal group; however, it does require intense time investment from Rector as the primary organizer. The goal of MABIG is to remain a small, viable option for biological anthropologists at all levels in the region. In 2014, the MABIG meeting was completely subsidized by the Dean's office of VCU's College of Humanities and Sciences, so there were no registration fees. The conference included lunch, snacks, and a concluding reception. In subsequent years, minimal registration fees were asked only of fully employed participants. Moving forward, MABIG will continue to partner with VCU's College of Humanities and Sciences, as well as other local universities, to keep costs free for students and low for other participants. Room reservation fees are waived by the university, and nametags are either donated by the College or an organizer. Lunch and a reception have always been a priority to maintain a sense of connection during break times. There is no official business meeting, board of directors, or banquet, so there are no service obligations or additional costs. A call for proposals generally goes out 1–2 months before the conference, requiring only a

² BAWMN was formerly PAWMN, the Physical Anthropology Women's Mentoring Network. The term "physical anthropology" is largely associated with the colonial period when a main goal was the description of different "races" and bolstering white Euroamerican beliefs in eugenic superiority. "Biological anthropology" is more inclusive of evolutionary principles of phylogenetic change, ontogenetic change, and variation based on environmental conditions, not sociocultural biases. AAPA members have recently voted to become the American Association of Biological Anthropologists (AABA), but, as of this writing, the change has not yet become official.

Table 1 Conference planning checklist

Conference Checklist

1 Year before Event (*If Hosting at a University*):

- Begin looking into room reservations as far out as a year beforehand
- Contact and communicate with University reservations/scheduling, if applicable
- Negotiate room fees or funding from Dean's office, if applicable
- Contact and communicate with the state board of education or local school of education to develop accepted Teacher Professional Development opportunities

8 Months before Event:

- Update the conference website/prepare for the next conference
- Create call for proposals
- Update social media

7 Months before Event:

- Update social media/advertise for conference
- Begin searching for possible venue locations

6 Months before Event:

- Update social media/advertise for conference
- Check available funds (contact treasurer)/enlist sponsors
- Maintain a checklist of available funds
- Determine how funds will be collected (Note: University accounts can be complicated)
- Contact conference committee/schedule a meeting
- Search for a Keynote Speaker
- Discuss student mixer
- Reserve university poster board displays, if needed/available
- Contact local teaching groups and advertise Professional Development opportunities

5 Months before Event:

- Update social media
- Send out reminders for proposals/final call
- Narrow down search for venues/begin to book reservations if possible
- Decide on a hotel location
- Decide T-shirt color/design
- Plan student mixer
- Discuss transportation to and from event

4 Months before Event:

- Update social media
- Deadline for proposals
- Begin reviewing proposals and accepting abstracts
- Book conference venue
- Announce a recommended hotel on the conference website
- Look into parking on campus—prices/discounts for conference attendees
- Post accepted abstracts to website
- Create a Facebook page for students attending

3 Months before Event:

- Finish posting accepted abstracts to website
- Begin constructing conference schedule
- Order t-shirts

Table 1 (continued)

- Send out reminders for attendees concerning payment

- Confirm student mixer location/details

- Post transportation information/parking details/hotel options to website

- Begin designing flyers for event

- Confirm that venue and conference rooms are booked

- Create event program

2 Months before Event:

- Update social media

- Finish schedule

- Confirm payment with attendees

- Gather supplies for conference

- Square card reader (for debit/credit purchases)

- Tablecloth

- Coffee maker

- Hot water heater (for tea)

- Poster stands and poster boards (depending on what type used)

- Fold-out tables

- Chairs

- Extension cable(s)

- Surge protector(s)

- Fold T-shirts/begin boxing

- Finishing touches on event program

- Create a list of those who have and have not paid (use this list for registration table during event)

- Create goodie bags/event prizes (if desired)

- Gather audio and visual recording devices (if planning to record talks)

- Decide on T-shirt prices (for selling to attendees)

1 Month before Event:

- Update social media

- Print event flyers and begin distributing

- Print event programs (or complete paperless option)

Month of Event:

- Get breakfast food and coffee/tea (for event breakfast before talks)

- Check to ensure that projectors and audio devices work in the conference rooms.

- Update social media

Day before Event:

- Carry items over to conference room (or store in cars)

- Poster stands/boards/clips

- Camera

- Tables/tablecloths

- Chairs

- Square card reader

- Goodie bags

- T-shirts

- Coffee/tea maker

- Breakfast supplies

- Extension cable

- Event programs & schedule

- Get rest!*

Table 2 Costs and benefits of hosting regional conferences

Benefits of hosting	Costs/difficulties of hosting
Increased interaction with colleagues and development of professional connections	Accumulation of debt by costly mistakes and over-commitment
Greater potential for research development and collaboration	Gaining support from prominent scholars
Demonstration of work ethic and dedication	Acquiring funding for an interdisciplinary conference
Establishment of scholarly image and professional reputation for graduate students	Equally distributing responsibilities of hosting
Foundation for tenure and promotion requirements (service, research, and teaching)	
Positive reflection on host's institution	
Improvement of institutional knowledge and preparation for similar positions	

title to be submitted. Attendees are encouraged to “try out” talks they plan to give again at larger conferences.

The reality for many evolutionary or biological anthropologists in departments or schools that prioritize teaching over research, including VCU, is that Rector has no colleagues in biological anthropology and has struggled in the search for mentorship. MABIG developed out of this challenge and has resulted in a professional network that includes colleagues from across the region for Rector and other scientists who were in similar mentorship vacuums. For NEEPS, SEEPS, and MABIG, a shared integrated goal is also to connect the public with evolution research and education.

Discussion

Benefits of hosting

As our experiences and Table 2 make clear, there are several benefits to hosting regional evolution conferences. Hosts meet and interact with everyone who attends their respective conferences and therefore have a better than average chance of developing research, teaching, and outreach collaborations. Successfully hosting a conference while effectively balancing other commitments signals a person's work ethic and ability to follow-through on complex and difficult tasks involving individual and group coordination. In this case, individuals successfully hosting conferences appear more professional, successful, and overall more prepared for academia. Conferences are also positive reflections on the hosts' home institutions where the conferences are generally held. Hosting conferences also enhances one's depth of institutional knowledge and provides preparation for other similar and more prestigious service positions.

One of the central benefits for graduate student hosts is the ability to build their scholarly images in the field. Guitar was advised to begin portraying herself as a colleague as early on as possible, and hosting a conference is one way to demonstrate motivation as well as responsibility. Voluntarily and successfully taking on an intense workloads can be a great opportunity to build reputations

as productive, professional scholars. The fact that hosting conferences brings service, research, and teaching together is extraordinarily compelling for prospective academic advisors and eventual employers, as each will be a necessity for promotion and tenure.

Lynn and Rector, as a result of organizing and hosting SEEPS and MABIG respectively, gained professional connections and experience. For instance, Lynn was appointed 2018–20 Program Chair for the Biological Anthropology Section (BAS) of the American Anthropology Association (AAA). Rector gained professional collaborations and invitations for guest lectures and was also appointed to the ad hoc Science and Policy Committee developed in 2017 by the president of the AAPA.

Despite the danger of seeming self-congratulatory, it takes a certain amount of perseverance to organize a conference from scratch. We had to surpass the self-doubt in contacting and inviting prominent figures in the field to a meeting with predictably low attendance and then organize our own research for presentation. This remains true even after several years' experience. This perseverance is an important factor because institutions and organizations need service to survive and demand a high amount. While perseverance is a net positive, there is caveat. In bids for tenure and promotion at most universities, whether research or teaching is the primary factor in decisions about advancement, service is always the least important component of the tenure packet (Kasten 1984; Park 1996; Morgan et al. 1999; Green 2008).

Obstacles and drawbacks

The greatest obstacles to hosting conferences are inexperience, lack of guidelines, underdeveloped professional networks and reputations, and finances. Graduate students and junior scholars can have difficulty enticing more prominent scholars to small regional conferences. Equitable distribution of responsibilities can also be difficult for both students and faculty. Most of the chores of hosting take place on the host campus and occur sporadically. Lynn struggled for two consecutive SEEPS hosting

experiences to successfully coordinate proposal solicitation, review and acceptance, scheduling, and registration. SEEPS board members decided after the second and third years that the host committee should not be responsible for programming.

Importantly, conferences can also result in debt if too ambitious. Despite receiving another HBES grant, costs for SEEPS 2017 and 2018 overran income from registration and miscellaneous sales by nearly \$1000 per annum. MABIG costs are routinely more than registration provides. Costly mistakes and over-commitment can jeopardize future events if budgeting problems are not recognized and remedied.

Another obstacle specific to evolutionary research is its interdisciplinary nature. For instance, NEEPS explicitly mentions “psychology” in its title despite the conference actually attracting a wide variety of academics from various disciplines. This has led to some attendees in other departments having difficulties finding funding for a conference that appears to be outside of their discipline. To help alleviate this issue for those who might want to attend or host NEEPS, the organization recently altered the name of the meeting to “Conference on the Evolutionary Behavioral Sciences.”

Structural biases

Finally, many aspects of service—no matter how it is defined—are overwhelmingly allocated to women and faculty of color (Park 1996; Pyke 2014). Faculty of color tend to participate in more service than White faculty overall (Baez 2000; Porter 2007) and specifically as liaisons for the community and in professional organization leadership positions (Takara 2006; Griffin et al. 2013; Wood et al. 2015; Edwards and Ross 2018). Consequently, women faculty members take longer to earn tenure and spend more time on service relative to research compared to male colleagues (Pyke 2014). Likewise, Black faculty are less likely to be on a tenure track or get tenured (Modica and Mamiseishvili 2010) or to have other types of advancement opportunities in academe (Edwards and Ross 2018). Despite protestations that the leaky pipeline for females in STEM has been resolved (Miller and Wai 2015), in evolutionary and biological anthropology alone, women outnumber men as undergraduate and graduate students yet significantly fewer women than men are full professors in anthropology (Antón et al. 2018; Lynn et al. 2018). Black students and faculty are also significantly underrepresented in STEM fields and beyond the rank of associate professor (Modica and Mamiseishvili 2010; Edwards and Ross 2018).

When accessible conferences are hosted by those less represented in our disciplines and participation encouraged for both undergraduate and graduate

students, these local organizations provide models that attendees can reasonably aspire to recreate. These local students, researchers, and teachers can envision themselves in positions of power and academic success and can realize their own agency in redressing inequities and redefining academic structures (Baez 2000; Turner et al. 2018). It is therefore crucial to recognize and reiterate that when women and Black faculty found, organize, and host local regional conferences such as NEEPS, SEEPS, and MABIG, they are also providing access to opportunities for networking, collaboration, and research not otherwise accessible to many underrepresented scholars (Baez 2000; Silverman 2004). Feelings of intellectual and social isolation for female and Black faculty can be barriers to professional advancement, but service obligations can be directed toward developing more hospitable climates (Wunsch and Johnsrud 1992; Park 1996; Takara 2006; Edwards and Ross 2018).

Conclusion

We have advocated for the development of small, regional research conferences that provide opportunities for networking and research collaboration across local academic communities that are not always available to faculty at larger, national conferences. Hosting these regional conferences also directs service expectations to support people from underrepresented groups in academic programs and faculty, who may be both hosts and attendees of these conferences. An essential aspect of the three case studies presented is the promotion of education, research, and outreach in applying evolutionary education, which is a discipline that comes with additional challenges and isolating mechanisms. In spite of these obstacles, our experiences suggest that it is well worth the work.

Abbreviations

AAA: American Anthropological Association; AABA: American Association of Biological Anthropologists; AAPA: American Association of Physical Anthropologists; ALLELE: Alabama Lectures on Life's Evolution; AEPS: Applied Evolutionary Psychology Society; BAS: Biological Anthropology Society of the American Anthropological Association; BAWMN: Biological Anthropology Women's Mentoring Network; EvoS: Evolutionary Studies; FEPS: Feminist Evolutionary Perspectives Society; HBES: Human Behavior and Evolution Society; KEPS: Kids' Evolutionary Perspectives Society; MABIG: Mid-Atlantic Bioanthropology Interest Group; NEEPS: NorthEastern Evolutionary Psychology Society; PAWMN: Physical Anthropology Women's Mentoring Network; SEEPS: Southeast Evolutionary Perspectives Society; STEM: science, technology, engineering, and mathematics; SUNY: State University of New York; UA: University of Alabama; VCU: Virginia Commonwealth University.

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Authors' contributions

CDL and ALR outlined the paper purpose. CDL composed the first draft. CDL, AG, and ALR contributed to the first draft and approved initial submission. AR and CMTK conducted major revisions after peer review of original manuscript submission. All authors contributed equally to subsequent drafts, editing of final manuscript. All authors read and approved the final manuscript.

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