2023

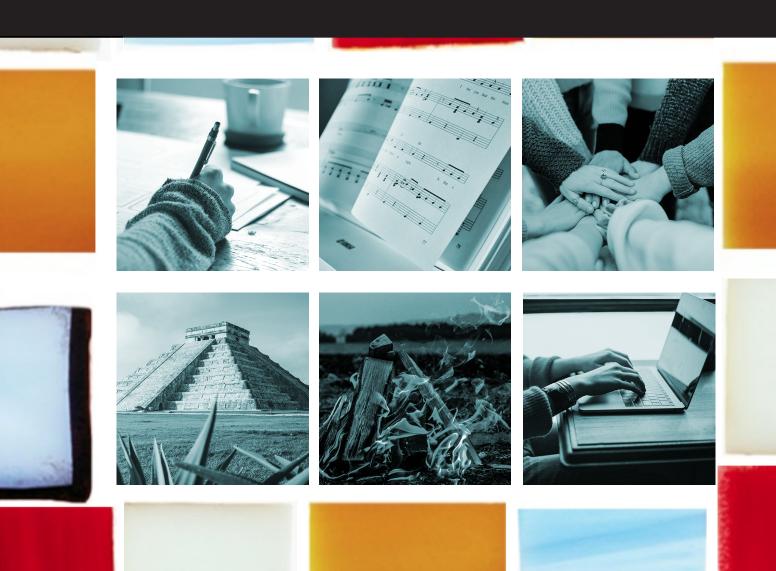# IMPACT: The Journal of the Center for Interdisciplinary Teaching and Learning. Volume 12, Issue 1, Summer 2023

IMPACT

THE JOURNAL OF THE CENTER FOR INTERDISCIPLINARY TEACHING & LEARNING

BU College of General Studies

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ABOUT US

Impact: The Journal of the Center for Interdisciplinary Teaching & Learning is a peer-reviewed, biannual online journal that publishes scholarly and creative non-fiction essays about the theory, practice, and assessment of interdisciplinary education. *Impact* is produced by the Center for Interdisciplinary Teaching & Learning at Boston University College of General Studies. *Impact* accepts submissions throughout the year and publishes issues in February and July. Please submit your essays for consideration at https://citl.submittable.com/submit.

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EDITORIAL STATEMENT

Dear Readers,

Welcome to the Summer 2023 issue of *Impact: The Journal of the Center for Interdisciplinary Teaching & Learning*. The essays in this issue explore how to enhance teaching and student learning in the classroom.

Our first contributor argues that providing students the opportunity to write questions about course material is a fruitful way to address students' reticence about asking questions during class and also may result in students performing better on testable material. Moreover, instructors benefit from having students' questions because the written questions can also be used by the instructor to know better what students are and are not understanding about course material and alerts instructors to where they can further explain or clarify course material. Finally, our first contributor also suggests that students in interdisciplinary classrooms might especially benefit from writing their questions, while instructors of interdisciplinary courses may find the flexibility with using technology to address the written questions in "real time" via the use of technology especially beneficial.

In our second contribution, the author argues that pre-service teachers' educational curriculum should address the academic literature that links poor musical-rhythmic tendencies with reading struggles for reading learners. The author also argues that the rhythm-reading connection is applicable to interdisciplinary educators because it asks those educators to reflect on possible connections between the body and the acquisition of skills that are usually considered purely intellectual.

Our *Impact* book reviewers cover a varied set of interesting and important topics in this issue. One reviewer informs readers about a handbook on community psychology that prioritizes applied and interdisciplinary work; another reviewer details an author's synthesis of what contemporary archaeology has now come to understand about Maya civilization's resilient and complex society through time and within their varied mosaic of managed environments; a different reviewer delves into an author's exploration of how digital media platforms generate novel opportunities for sufferers of trauma to make sense of their experience, and our final reviewer details an author's accounting of the history, origins, and evolution of the Camp Fire Girls*,* one of America's longest-serving girls' youth movements, its impact on girls' lives, and how the organization adapted to and resisted dominant ideologies about girls, culture, and race across time.

We hope you enjoy the various insights shared within this issue, and we continue to wish all our readers and writers good health and fortitude as 2023 continues to unfold.

All the best,
Lynn

Lynn O'Brien Hallstein, Editor-In-Chief, Director of the Center for Interdisciplinary Teaching & Learning

ABOUT THIS ISSUE'S AUTHORS AND EDITORS

Michael D. Mroz is a learning designer and graduate student in the School of Education at the University of Illinois Springfield. He taught for almost a decade as a secondary school music teacher, combining musical content with themes from ELA and STEM. For many years, he ran an organization, which used insights from the field of music psychology to teach instrumental performance. He has written on the intersection of music and science for the Oxford-based, sci-arts journal, *Seisma Magazine*. Additional areas of broad academic interest include biomusicology, cognitive linguistics, and philosophy of mind.

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Cheryl Weiner, MPH, PhD is a Girls' studies scholar whose work focuses on Jewish girlhood studies and girls' activism. She has spent more than twenty years working with girls in informal education contexts, developing curriculum, and working with college students to develop girls' groups through *The Girlhood Project* at Lesley University.

ANNOUNCEMENTS

Latest Announcements

Impact Essay Competition

Every December, the editors of *Impact: The Journal of the Center for Interdisciplinary Teaching & Learning* invite sub-missions of scholarly and creative non-fiction essays between 1,000 and 5,000 words on any aspect of interdisciplinary teaching or research. The author of the winning essay will receive a $250 award and publication in *Impact*.

Essays should be readable to a general, educated audience, and they should follow the documentation style most preva-lent in the author's disciplinary field. Essays for this contest should be submitted by the first Monday in December to http://CITL.submittable.com/submit. See our general submission guidelines in Submittable.

CITL reserves the right to not publish a winner in any given year. Faculty and staff from the College of General Studies are not eligible to submit to this contest.

Call for Papers

Diversifying Philosophy 101: A Teaching Practicum

As Jay Garfield and Bryan van Norden argue in a recent *New York Times* op-ed, the discipline of philosophy "remains resolutely Eurocentric." Of the top fifty philosophy doctoral programs in the English-speaking world, only 15% have any faculty members who regularly teach any non-Western philosophy. This lack of curricular diversity in part springs from the lack of embodied diversity among philosophy PhDs, who in the United States are 86% non-Hispanic white. Further, women currently make up only 20% of full professors in philosophy departments, a statistic that has remained essential-ly unchanged since the 1980s. This curricular and faculty homogeneity often leaves instructors looking to diversify their syllabi with few resources on which to rely.

To help rectify this problem, Boston University's College of General Studies will host a day-long teaching practicum for those interested in making their philosophy curricula more inclusive. We seek instructors interested in giving 45-min-ute presentations on how to incorporate a figure from an underrepresented group from before 1900 into an introductory course. Special preference will be given to presentations on women or thinkers from the Global South. Proposals should be practical, not theoretical, providing other instructors with useful strategies for efficiently integrating relevant figures into existing curricula. Presentations should feature specific suggestions regarding course materials and assignments.

Please submit a 250-word proposal to Joshua Pederson (pederson@bu.edu) by November 4, 2023.

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The Benefits of Asking Students to Write Their Questions Down

By C. Michael Smith, PhD, Roanoke College

Abstract

Many students seem to prefer to resist the opportunity to ask questions during a classroom lecture. However, several studies have suggested that when students develop questions, they increase their higher-level cognitive functions, thus potentially improving their understanding of the material. Therefore, for those lecturers who struggle to motivate students to ask questions orally, do the same benefits exist if students are required to pose written questions to the lecturer? The findings of this classroom experiment provide some indication that students perform better on testable material for which they generated written questions, than on material that was covered in the lecture and reading alone.

Introduction

Even after thirty years, many moviegoers of the 1980s quote from the classic teen comedy, "Ferris Bueller's Day Off." In one memorable scene, a business teacher, played by real life economist, Ben Stein, lectures his class on the potential impact of tariffs. As he goes over the material, he frequently attempts to obtain feedback from his students by posing a question, and following the question up with "anyone, anyone." Unfortunately, the only response he receives from his students are glazed-over eyes and some occasional drool.

After many months of online learning, it seems that many students have returned to Ferris Bueller's classroom. While attempts may be made by classroom leaders to encourage questions and feedback, students oftentimes passively resist the opportunity potentially to gain additional clarity through the act of speaking up (Graesser & Person, 1994; Dillon, 1990). However, even before the post-pandemic return to the classroom, many lecturers found themselves baffled by, what is perceived as, apathy on the part of silent students. However, it is important to note that, from the student's perspective, the pressure associated with asking a good question in a live classroom can be somewhat daunting. While the question is first and foremost a request for more information, the question itself, implies that the student asking the question has sufficient knowledge to structure the question properly and understand the answer (Miyake & Norman, 1979). Therefore, the inability of students to understand if they have sufficient knowledge to ask a question or not, is a known barrier that prevents student questions in the classroom (Graesser & McMahen, 1993; Pressley, Ghatala, Woloshyn, & Price, 1990). Another reason that students oftentimes remain silent is due to the fear of appearing uneducated in front of their classroom peers (Graesser, McMahen, & Johnson, 1994). No one wants to be judged as having asked a "dumb question." And yet, a third reason for student silence rests on the shoulders of the classroom leader. Lecturing faculty (who from here on will simply be referred to as lecturers) sometimes get on a roll, giving good examples, making strong points, and progressing the class efficiently to its end. Students legitimately do not wish to interrupt the lecture with questions that disturb the lecturer's solid flow of material. In addition, lecturers tend to be poor role models for question-asking as most of the questions that are posed to the classroom are low-level, short-answer questions that are simply designed to confirm understanding rather than to provoke thought (Dillon, 1991). In short, many lecturers do not ask good questions, themselves.

There are likely added challenges associated with asking questions in interdisciplinary classrooms. Not only can interdisciplinary topics prove more challenging than many of the disciplines being taught in the average course, but students are also being asked to speak about interdisciplinary topics for which they are likely to be relatively unfamiliar. In fact, based on the nature of interdisciplinary studies, students may worry that in many cases, the question may be more important than the response! This is liable to cause interdisciplinary students, in particular, to feel a significant amount of pressure when it comes to speaking up and attempting to ask a good question.

Interestingly, when lecturers were polled as to the reason for the silence in their classrooms, the results came back very simply as "fear" and "shame" on the part of the students (Nuri, 2019). However, even though the lecturers deemed the silence to be primarily a student issue, they further posited that the solution was theirs to implement. The lecturers sug-

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gested that the best method of overcoming these two powerful emotions would be to find a way to motivate students to participate by providing an interesting and comfortable learning atmosphere.

The principal issue with this arguably good advice, from a practical perspective, is the fact that most lecturers with silent classrooms would claim that they already attempt to create positive learning environments and comfortable classroom atmospheres. Lecturers regularly experiment with different classroom methods in an attempt to efficiently convey the required information while fostering student engagement (Case, Bartsch, McEnery, Hall, Hermann, & Foster, 2008; Holley & Steiner, 2005). Still, many lecturers struggle. Oftentimes, even after considerable efforts to increase engagement, the only reward seems to be more silence from students. Given the difficulty that some lecturers experience in their attempts to evoke questions from their students, some may wonder: Is the effort worth it? Do students truly benefit from asking questions, or do they perform just as well when they allow the lecturer to cover the chosen material sans feedback?

Research would seem to suggest that questioning does have an important role to play in meaningful learning (Aguiar, Mortimer, & Scott, 2010; Chin & Osborne, 2008). According to Brown, Palinscar and Armbruster (1984) and Rosenshine, Meister and Chapman (1996), question generation is important to comprehension-fostering as it focuses the student's attention on content. However, student questions are not the only way to generate higher-level cognitive functions. They are simply one way (Garcia & Pearson, 1990). Therefore, is it possible that lecturers, frustrated by their efforts to solicit questions from their classroom, may find greater benefit by refocusing on other areas? One very popular method, given the reluctance of many students to ask questions, is for the instructor to pose their own questions to the class during the lecture that are designed to focus student attention on the more important concepts. Parkinson and Whitty (2022) found that the use of these "tag questions" significantly aided student understanding of the material, but did not necessarily generate a natural verbal response. But is a verbal response needed to successfully convey classroom material? Higher-level cognitive functions in students could be fostered by an improved delivery of the course material, perhaps by carefully selecting relevant tag questions, or by developing assignments designed to increase student knowledge and retention. In fact, the assignment, itself, could be to pose relevant and thought-provoking questions to the course instructor.

Many lecturers have experimented with requiring oral student engagement in the form of assignments and other graded material. A popular method includes the "flipped classroom", where the lecturer no longer lectures at all, but instead attempts to aid students, as they are responsible for their own learning (Lai & Hwang, 2016). While the flipped classroom provides many opportunities for an enhanced learning experience, this type of classroom arrangement also poses many challenges (Akcayir & Akcayir, 2018). Therefore, many lecturers may be naturally inclined to pursue a simpler means of increasing classroom engagement. Another strategy might be to simply require students to ask oral classroom questions, but it is arguable if this type of activity would truly motivate student engagement, or rather, create additional resistance and tension. However, what if instead of requiring oral questions, the students were only required to write their questions down?

While much research has looked at the potential benefits of asking oral questions naturally in a live, in-person, classroom, little research has analyzed the results of student comprehension improvements associated with written questions (Harper, Etkina, & Lin, 2003). Is it possible that if students won't ask questions in a live classroom, that they could still benefit from writing their questions down, perhaps in a journal or some other written assignment? If this activity is constructive for the student, the benefits to the lecturer are obvious. Asking students to simply write down their questions is an extremely practical and tangible activity. Unlike the ambiguous recommendation to create a comfortable classroom environment, or the course strategy transformation associated with the flipped classroom, a written assignment where students pose questions to the lecturer is simple, tangible, and easily implementable in most instances. But does it help? Do students benefit when they generate their own written questions on class material, or do the knowledge gains only come from questions generated orally during classroom interactions?

Methodology

To better understand if students do, in fact, benefit from posing written questions to the course lecturer, a small experiment was devised that attempted to quantitatively test student performance on tested material using available pre-pan-

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demic data. The first type of information analyzed were student responses to questions based on course material that had been lectured on without written student questions. This information represented the standard lecture format in a quiet classroom with no (or very few) student questions posed. The second type of information, however, were student responses to questions that were addressed with students as a response to required written questions, posed by students to the lecturer.

Data for the experiment came from the 2019 spring semester "Personal Finance" course at a small liberal arts college. This particular course is an introductory course, but typically fills up with the course maximum, twenty-five students, long before first- and second-year students are provided the opportunity to enroll. During the semester examined, over ninety percent of students were either in their third or fourth years. Approximately one-third of students in this business elective course were business majors, but the remaining students represented a variety of disciplines, including economics, psychology, sociology, public affairs, and human performance. As is the case in interdisciplinary studies, many of these students had little to no background in the course topic The wealth of disciplines represented in the class may help to explain why the students in this course seem to be particularly quiet during course lectures, even before the pandemic. As suggested above, the risk of being perceived as having asked a "dumb question" may be higher for students with little background in the subject matter.

The assignments

The course assignments that required students to pose relevant written questions to the course instructor were four personal finance case analyses that covered topics relevant to recent lectures. For each assignment, students had to provide an overview of the case along with an analysis of the information they found most important and how they could potentially apply the information in their own financial lives. However, in addition to these traditional case analysis methodologies, the assignment additionally required students to mindfully pose a written question that they still had about the case material or overall topic. Students were then informed that the instructor would answer questions that were deemed "thoughtful, insightful, helpful, and answerable" in the next class. Further, students were advised that these anonymous questions (along with the associated answers) should be considered testable material on upcoming exams.

Examples of questions that did not meet the specified criteria included:

- What is the best credit card?

- Should I just stay on my parent's insurance plan after I graduate?

While these questions relate to the respective topic, they are largely opinion with potential benefits that may only relate to an individual in a specific financial situation. To truly answer these questions would require much more information to be provided, and even then, there is little insight that would prove helpful to the class, as a whole.

Examples of questions that met the specified criteria included:

- What happens if you are an "authorized user" on a credit card, and the primary user dies with credit card debt?

- Is it possible that someone could make too much money to be allowed to contribute to a Health Savings Account?

Both of these questions take subject matter from their respective cases and delve deeper into an understanding of the specific concept. They are practical applications, with researchable answers that could potentially prove helpful to the personal finances of many consumers.

The average number of student questions answered for each case assignment was seven (for a total of twenty-six answered student questions over the course of the semester). Numerous student questions did not fit the required criteria; however, some questions posed by students demonstrated an obvious misalignment between the subject matter taught,

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and a true understanding of the material. Armed with these questions, the instructor was able to clarify previously-taught material, based on the specific type of misunderstanding expressed. In addition, some questions were so deep and complex, that the instructor was forced to carefully research answers before providing responses.

Interestingly, even if students were not benefiting from the experiment, the instructor developed a stronger understanding of the course material in researching and preparing responses to the more thoughtful student-generated questions. It is worth noting that while this outcome was far from the original goal of having students benefit directly from the generation of their own written questions, it was still a noticeable benefit. Given this result, it would appear that questioning in the classroom (written or otherwise) may create a meaningful learning opportunity, not just for students, but for the instructor as well. Thus, the activity of questioning may have an even more important role to play in the classroom than the current literature would seem to suggest. It is possible that student questions not only enhance the learning opportunities for the students, themselves, but also provide the instructor with a natural way to keep the course material fresh and engaging.

The exams

Three exams were scheduled over the course of the semester. The exams consisted of multiple choice and essay questions. For the essay section of the exam, the students had to answer three out of four listed questions. Students were encouraged to skip over the question for which they were the least prepared to answer. Each essay question was worth ten points (out of a total of one hundred points on the exam).

For the spring semester of 2019, exams one and three contained one essay question based on the questions developed by the students, themselves, in their case assignments. The second exam contained two questions that were inspired by students. For each exam, the remaining essay questions were created by the instructor based on material covered in class and other readings.

The research question and hypothesis

For the purposes of this experiment, both types of questions (those developed by the students themselves, and those developed by the instructor) were analyzed to determine the average number of points deducted for incorrect, or partially incorrect responses. The primary research question for this study is: Would students perform better on the material that they helped develop from their own question generation?

Results

Before testing the hypothesis, descriptive statistics were run on the values. It is interesting to note that the N = 75 for the instructor-created questions is almost the same as the N = 72 for the student questions. Given that there were eight instructor-created essay questions and only four student-created essay questions, the students heavily self-selected their own questions when given the option to leave a question blank (most likely the question in which they had the least amount of knowledge).

The average number of points deducted on essay questions developed solely by the course instructor was 2.89 and the average number of points deducted on questions generated by the students was 1.64 (independent samples test confirms significance). Therefore, it would appear that the students were able to more accurately respond to questions they, themselves, had generated. See Table 1 and Table 2 for more information.

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Table 1 – Exam Question Point Deductions: Group Statistics

	Question Type	N	Mean	Std. Deviation	Std. Error Mean
Deduct	Instructor created	75	2.89	2.518	.291
	Student questions	72	1.64	2.247	.265

Table 2 – Independent Samples Test on Exam Question Point Deductions

Deduct	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	5.604	.019	3.182	145	.002	1.254	.394	.475	2.034
Equal variances not assumed			3.190	144.246	.002	1.254	.393	.477	2.032

Discussion

Many course instructors, in the post-pandemic classroom, may be thinking about student classroom response techniques. Both students and faculty are adjusting to a new classroom "normal" after months (or years) of online-only instruction. And, while much more research needs to be done in this area, the results of this experiment may provide lecturers who are adjusting (or readjusting) to face-to-face class meetings with additional insight into strategies and techniques that can serve to further enhance student learning objectives.

While lecturers can and should continue to experiment with methods to increase oral student engagement, an additional option may be to simply require students to thoughtfully develop their questions in writing, as this particular experiment noted tangible benefits and addressed several known barriers to oral classroom question-asking. While the significant limitations of this experiment suggest the results are far from empirical evidence in support of the technique, there still appears to be sound benefits to this extremely simplistic strategy. First, by using written questions, students must overcome the barrier associated with the feeling that perhaps they do not understand the material sufficiently to ask a relevant and insightful question (Graesser & McMahen, 1993). As noted above, this particular barrier may prove particularly troublesome in interdisciplinary studies where students may feel that they know less about the particular subject matter. The requirement that a question be generated, regardless of their current level of understanding, would seemingly serve to focus students on the topic and improve understanding. In addition, questions that demonstrate a lack of understanding are also extraordinarily helpful for course lecturers as insight can be gained into the course material that may need to be further explained or expanded upon. Further, written questions negate the temptation for students to remain silent due to social concerns (Graesser, McMahen & Johnson, 1994). Since the written questions are not, by necessity, publicly disclosed, students need not worry about what their classroom peers might think about their question.

Further adding to a lecturer's incentive to require written questions, as opposed to the traditional "raising of the hand", are technology advancements that make the implementation of the written question strategy both effective and efficient. Depending on the lecturer's preferences, they may find success with an old-fashioned word processor and a homework

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assignment, or with smart phone applications and software that allow for a student's written questions to be addressed in the classroom, in real time. There is considerable flexibility.

Instructors in interdisciplinary studies may find the flexibility associated with using technology particularly beneficial when it comes to student questioning due to the increased level of collaboration often used in the program. When it comes to addressing student-generated questions, students may benefit greatly from the instructor's ability to consult with cross-disciplinary faculty connections. Technology, as a communication tool, could help significantly in making these connections across campus. Further, while feedback is necessary for any discipline, the need for carefully-crafted responses to be developed for interdisciplinary course questions is imperative. Technology, once again, can aid in making the process of generating useful feedback as efficient as possible.

In summary, based on the results of this classroom experiment, asking students to pose questions to the course instructor in written form appears to aid them in learning the material, as it relates to their ability and performance on exams. In addition, the information gained from the written questions can also be used by the instructor to better relate to student understanding, spot disconnects, and provide further explanation or clarity when needed. And lastly, the written questions may even aid instructors in their efforts to stay up-to-date on relevant course topics and material.

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Training Teachers about Entrainment: The Unstressed Tie between Rhythmic Skills and Reading

By Michael D. Mroz, School of Education, University of Illinois Springfield

What exactly do teachers learn about the science of reading? What cognitive processes does successful reading share with other human competencies, and likewise, what can be said when reading ability is not all it could be? Since the 2000s, university departments of education have made noticeably positive strides in preparing teachers to teach reading. During the decades prior, though, many such departments regrettably embraced the rise of the Whole Language approach (Goodman, 1981), which believed reading acquisition to be an activity analogous to early language learning; that if children are simply immersed in a culture of reading within their classroom, they will eventually become sufficiently literate. One of several reasons why this approach did not pan out is that reading is an extremely multifaceted behavior stemming from a variety of skills and know-how. A theory of reading acquisition ought to acknowledge that a child must successfully draw upon different mental processes to perform specific kinds of reading tasks, that these capacities are likely to change throughout their development, and finally that these features vary from child to child (Seidenberg et al., 2020). In light of this, pre-service teachers are not commonly made aware, in their programs, of one particular domain-specific feature deeply tied to the science of reading; a feature grounded in the seemingly disparate disciplines of music psychology and music education. This paper puts forth the idea that a comprehensive curriculum to train pre-service teachers in the science of reading ought to make mention of the academic literature that links poor musical-rhythmic propensities with reading struggles. More specifically, teacher-training programs can better prepare pre-service reading interventionists to confront issues like developmental dyslexia, by incorporating research in psychology and neuroscience. Lastly, the rhythm-reading connection is relevant to a wide variety of educators, including interdisciplinary educators, as it asks them to consider broadly what role the body might play in the acquisition of skills that are often considered purely mental.

Dyslexia and its Consequences

As it turns out, those who lack a particular kind of bodily and auditory proficiency called, "rhythmic entrainment" (the ability to synchronize with an external pulse), often exhibit symptoms of developmental dyslexia. According to the International Dyslexia Association Ontario, "Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language…" (What is Dyslexia?, n.d., para. 2). Unsurprisingly, this difficulty in phonological processing can have a substantial negative impact on academic achievement. Duff (2022) found that second grade children with dyslexia showed considerably lower performance in both reading and mathematics than their non-dyslexic peers. Moreover, the traits typically associated with dyslexia tend to carry on into adulthood and often have an impact on workplace performance and achievement. According to de Beer et al. (2014), "In the context of work DD (developmental dyslexia) affects nearly all domains of functioning, mostly in a negative way. Within each domain the impact of DD increases over the course of life" (Abstract: Conclusions, para.1).

More on Rhythmic Entrainment and Reproduction

Understanding more about the ability to do entrainment, from a biological point of view, might help shed light on a partial underlying cause of developmental dyslexia. Given that entrainment is a ubiquitous skill among the human population, there are many evolutionarily-based hypotheses attempting to explain it. Some scholars take a kinesthetic approach. To Brown (2022), for example, entrainment arose from group dancing, whereby bodily percussion offered a sensory-motor connection between sound production and synchrony. Other hypotheses involve features of speech-matching. A study by Bowling et al. (2013), for instance, had participants read gibberish phrases alone and with partners; the authors found that participants in pairs had greater consistency of duration between spoken phrases than did participants alone. This suggests, according to the authors, that such rhythmic synchronicity may exist in order to foster cooperative social interaction. Many researchers have noted the deep biological similarities between musical rhythm and speech rhythm. As Patel (2006) states:

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One area of overlap concerns perceptual grouping, the mental clustering of events into units (e.g., phrases) at different hierarchical levels. Grouping in music and speech shows many similarities. Music and language mark group boundaries in similar ways using…durational lengthening, and cross-domain sensitivity to these grouping cues starts early in life. (p. 99)

Patel considers the possibility that musical grouping abilities emerged from certain aspects of speech rhythm. On the other hand, the act of mimicking a rhythm after it is played is referred to as *rhythmic reproduction* or *rhythmic sequencing*. Sequencing is similar to entrainment but it incorporates short-term memory. Tierney et al. (2017), in particular, found that participants' ability to sequence rhythms was associated with verbal memory (p. 864). What, then, can be made of those who cannot keep a beat? With the exception of roughly 3% of the population who seem to be entirely "beat deaf"(Phillips-Silver et al., 2011), poor rhythmic entrainment is not a clear-cut deficit; rather, individuals generally exhibit a spectrum of synchronization-related impairments. According to Tranchant et al. (2016), on average, clapping entrainment is easier than dancing with a group, while tapping to a metronome is easier than to music. Whatever the genesis of this kind of beat conformity, there is little doubt that it is intricately interwoven with language processing.

Rhythmicity, Decoding Issues, and Reading Remedies

The link between dyslexia and poor musical-rhythmic skills is well established. The association was first discovered by Stambak (1951), where kindergarten students were asked to interpret differently-spaced groupings of asterisks written on a piece of paper, as rhythms to be tapped out. For instance, three consecutive asterisks should be tapped as three consecutive beats, while three asterisks each with a space in between should be tapped the same way, but with rests after every beat. Stambak found dyslexic students scored less well than did traditional readers in this rhythmic reproduction task. The mistranslation of visual symbols into audio output is not the end of the story, though. Reading impairment is also related to the misinterpretation of audio input. Tallal (1980) found that reading-challenged students fared worse than the control group in a battery of temporal order audio perception tests. While there was no difference in the two groups' perceptions of tones at slower rates, the two groups diverged as the rate at which the tones were played increased. This is directly related to reading-impaired students' poor ability to detect speech sounds, or phonemes: "c"-"a"-"t," for example, a certain kind of phonological awareness. These speech sounds are said at an extremely rapid rate – approximately 30 ms (Iyer, 2002, p. 401). A study by Overy (2003) revealed that dyslexic children scored lower on 7 out of 9 tests of musical timing skills than the traditionally-reading control group. Furthermore, the author stated that "an interesting correlation was found between spelling ability and the skill of tapping out the rhythm of a song, which both involve the skill of syllable segmentation" (p. 18). Dellatolas (2009) found that the better kindergarten students performed on a rhythm reproduction task, the better their reading ability in the second grade. Similarly, Tierney and Kraus (2013) found a correlation between a participant's ability to tap in synchrony with a beat, and different sub-skills involved in reading.

It is clear from this work that there is an association between reading and rhythmic aptitude, but what does the literature say about whether training one aspect will improve the other? Bhide et al. (2013) found that at-risk readers, upon tapping along to a beat, tended to tap prior to each beat in an attempt to predict when it would occur, instead of naturally entraining with it. The authors found a significant correlation between improved tapping ability and improved reading fluency, but due to a lack of a control group and a small sample size, the authors could not show a causal effect. Nevertheless, the authors tested rhythmic tapping as a reading intervention and deemed it successful as such: "This small-scale intervention study suggests that a theoretically-driven musical intervention based on rhythm and on linking metrical structure in music and language can have benefits for the development of literacy and phonological awareness" (p. 120). The first randomized controlled trial of the effect of music training on reading ability found that the musically-trained group, consisting of severely dyslexic children, showed a noted improvement in reading accuracy compared to the control. Additionally, the authors claim, "the improvement in rhythmic reproduction was a good predictor of the improvement in phonological abilities. This supports the hypothesis of a causal role of rhythm-based processing for language acquisition and phonological development" (Flaugnacco et al., 2015). Zooming out to the macro-level, a systematic review of music-based interventions for dyslexia found that out of 23 studies, "Twenty-one of the studies reported positive effectiveness of interventions and two studies reported mixed results" (Rolka & Silverman, 2015, p. 8). Finally, the most recent literature review on music and dyslexia discovered that:

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…musical and auditory interventions, designed to address the DD-related phonological deficits, yielded a beneficial effect on reading to some extent. The comparison between musical/auditory training programs and standard, language-based only, remediation approaches revealed – in most cases – comparable efficacy…Therefore, such findings support the hypothesis of a transfer effect of musical/auditory training on phonological skills. (Cancer & Antonietti, 2022, sect. 7)

One limitation of the aforementioned intervention studies is that some do not make a clear distinction between music in general, and rhythm, specifically. In either case, though, the results display an unavoidable relationship with general phonological processing – a vital sub-skill in reading. In addition, while many important questions remain unanswered, taken together, this work points to a highly overlooked analogy in human cognition.

An Unstressed Tie

Unfortunately, very few teachers are aware of the analogy between poor rhythmic entrainment and dyslexia, let alone the fact that musical-rhythmic interventions can improve phonological awareness in dyslexic students. The truth is, teachers' general conceptions of dyslexia tend to be mixed. According to Knight (2018), most teachers felt that the subject of dyslexia was "not covered well at all" in their teacher training. In more detail, Knight found that a majority of teachers gain their understanding of dyslexia at the level of behavior, instead of at the more fundamental levels of biology and cognition. Relatedly, almost 17% of teachers claim that dyslexia is primarily a vision-related deficit (Knight, 2018) even though the evidence for this is lacking (Thorwrath, 2014) (Wadlington & Wadlington 2005) (Washburn et al., 2013). Perhaps a partial reason why dyslexia issues persist as they do is a lack of scientific understanding among educators of the different abilities that play a role in successful reading. Beyond the narrow subject of dyslexia, scientific knowledge of reading acquisition among teachers, in general, falls short. A systematic review by Meeks et al. (2016) on the extent to which pre-service teachers were prepared to teach reading showed that:

If the studies reviewed are representative of teacher education courses generally, it would appear that scientifically-based methods for the teaching of early literacy, including the systematic and direct instruction of phonemic awareness…may not be included in sufficient depth in many PST education programs. (p. 21)

Likewise, Tortorelli et al. (2021) reviewed 27 studies consisting of assessments of teacher knowledge of phonological, phonemic, and morphological concepts. The researchers discovered that pre-service teachers answered only 50-60% of the items correctly. Given these numbers, it is easy to see how pre-service teachers might be under-informed about the science of dyslexia. In response, Anderson (2021) calls for the addition of neuroscience and developmental psychology in teacher training curricula. Anderson asserts that while there have been concerted efforts to turn neuroscientific and psychological findings into practice-based approaches that teachers can use, these findings are not often taught in tandem with the practical methods. As the author adds, "There is a clear role for the presentation of interdisciplinary scientific information on reading development and evidence-based reading practices for dyslexia across education, neuroscience, and psychology fields" (para. 12).

What, then, can be made of the prevalence of the rhythm-reading connection in elementary teacher training programs? Of course, it cannot be ruled out that this concept remains entirely absent from teacher preparation curricula. However, because there is a paucity of the "why" with regard to reading difficulties, on the whole, it is reasonable to conclude that it is, at most, underemphasized. In any case, the extent to which this interdisciplinary notion is taught to pre-service and even in-service teachers is not in proportion to the rich body of research literature on the subject. With this in mind, education faculty ought to incorporate consistently this literature into modules having to do with phonological and phonemic awareness, dyslexia, or reading interventions. Even if teachers are not solely responsible for performing interventions for struggling readers themselves, and even if a rhythm-based intervention would not end up being successful for said students, teachers still deserve exposure to this body of research in their coursework. Such exposure would provide them with a deeper possible explanation for their students' reading difficulties; and failing to instill in teachers the potential for a bird's-eye-view in this way, I argue, is to devalue the profession, even only if implicitly and slightly. In agreement with Knight (2018), "...the blame here should not lie with the teachers, but rather with the education institution for not ensuring that teachers are entering the workforce with adequate knowledge..." (Discussion, para. 3).

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Entrainment and The Body beyond Teacher Education

Pre-service elementary teachers and reading interventionists are not the only ones who would benefit, on the job, from understanding how entrainment and basic rhythmic skills interact with linguistic adeptness. Teachers of high school language arts and professors of English composition, for example, could use this information to teach best practices of punctuation. According to Sopher (1977):

I propose to put forward a view that speech rhythm...should in fact constitute the basis of sound punctuation...it is the failure to recognize this principle that has led those writers to recommend a system of punctuation which tends to be convention-bound and mechanical rather than natural and meaningful. (p. 304)

As the author states, one feature that makes writing agreeable is its rhythmic aspect; its punctuation, which ought to be grounded in the natural rhythm of speech, and not in arbitrary prescriptions. Of course, the meaning of the sentence must also be considered, but educators who choose to endorse such a view, might ask students to read a sentence aloud from one of their papers, and then tap out the rhythm of the way they vocalized that sentence. Pauses or "rests" in the rhythm, would indicate a natural place for a comma, for instance. It is still an open research question whether difficulties in rhythmic entrainment and reproduction are correlated with poor punctuation in prose; but this simple technique is one well worth considering by writing teachers, especially those who are interested in interdisciplinary teaching and learning techniques.

While entrainment may not have a tight-knit relationship to every academic discipline, there is an idea that bodily action, broadly construed, can influence the way one thinks about abstract material. This is related to a rich research area known as, "embodied cognition." According to Wilson & Foglia (2015), "Cognition is embodied when it is deeply dependent upon features of the physical body of an agent, that is, when aspects of the agent's body beyond the brain play a significant causal or physically constitutive role in cognitive processing" (para. 1). Notions of embodiment even show up in subjects like mathematics.

A basic and unsurprising instance of embodied mathematics is the act of counting on the fingers to solve arithmetic problems, which is often seen in children (Fischer & Brugger, 2011). Segal (2011) used a gestural interface to compare children's "tapping" vs "sliding" techniques for solving different math problems. The authors found that tapping worked best for solving discrete content, while sliding was most successful for problems having to do with estimation. Tapping has implications for teaching more complex mathematical concepts, too. Tran et al. (2017) discuss the use of gesturally-based software that helps algebra students internalize the concept of a slope. According to the authors, the technology was:

designed to experience the difference in slope as a tapping tempo, providing the embodied experience of slope as a literal rate over time. Tapping influences the vertical movement such that faster tapping creates more steepness and, by having embodied control of this mathematical process, students can internalize that slope is about a vertical change over a specific horizontal distance. (A case illustration of Tap Tempo, para. 2).

Such educational technology ought to inspire pedagogues to examine closely the mapping between a learner's mental representation of a concept, and the way they enact that representation in the world around them.

Conclusion

Whether it pertains to elementary teachers, English professors, or tutors of mathematics, it is apparent that entrainment and bodily action play a role in learning content that is commonly thought about as merely mental. In the case of teacher education, there ought to be a larger interdisciplinary conversation that would welcome theoretical knowledge of various kinds (psychological, kinesthetic, neuroscientific, etc.) into teacher training programs. It may be argued that these features are, indeed, covered; but when balancing them with pragmatic, in-the-classroom training, it should be expected that they comprise only a small fraction of the overall coursework. Nevertheless, a theoretical understanding with respect to the relatedness between rhythmic skills and dyslexia, specifically, could serve as a humble but discernible point at which

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teachers might more pervasively think from "first principles" about other pressing issues in elementary education. Finally, as I have shown, knowledge about entrainment and embodiment, more generally, offers educators of all kinds, a fresh paradigm by which they may see how their students approach and grasp different scholastic problems.

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BOOK REVIEWS

Review of Caroline S. Clauss-Ehlers, ed. *The Cambridge Handbook of Community Psychology: Interdisciplinary and Contextual Perspectives.* Cambridge: Cambridge University Press, 2022. Online ISBN 9781108678971, 694 pp. Hardcover ISBN: 9781108492188, 850 pp.

By Ann Scheunemann, Harvard University

The Cambridge Handbook of Community Psychology: Interdisciplinary and Contextual Perspectives represents an ambitious and largely successful effort to consolidate and distill the principles, history, and contemporary research of the field into a single (if large) collection. Practicing community psychology involves collaborations in a range of fields, such as public policy, anthropology, history, public health, environmental science, and sociology, which is reflected in this work through the integration of community psychology into complex and interdisciplinary problems related to community well-being. The book's breadth makes it an ideal read for researchers interested in gaining an overview of the field; while each chapter is germane to community psychology most can also stand-alone, allowing readers to select and read topics in the order most relevant to them.

Additionally, the book's organization hinders potential anxiety induced by its length; separated into four sections, it begins with foundational concepts before transitioning to sections on research and evaluation and application, and then ending with suggestions for future directions. Applied research that is grounded in current events further enhances the relevance of the book to readers while also facilitating engagement with the topics. The author uses the COVID-19 pandemic and Black Lives Matter protests in the first chapter to demonstrate the importance of promoting individual and community wellbeing through better understanding of oppression and empowerment, and the need for multi-level (e.g., intrapersonal, interpersonal, community, and national), multi-systemic (e.g., medical, governmental) resolution of challenges identified within the contemporary context. Subsequent chapters exemplify community psychology epistemologies by providing conceptual summaries or a literature review followed by the application of these concepts to current research, programs, or interventions.

Embedded throughout the book are important themes within community psychology. As an epistemological foundation of the field, power dynamics are exemplified within discussions of empowerment, oppression, critical perspectives, and reflexivity. Community psychology is an applied field; researchers raise voices of underserved populations through the development and execution of actionable, contextually appropriate research. Researchers' dedication to historically marginalized populations is exemplified in their focus on discrimination against the LGBTQ community (Chapter 28), women in leadership (Chapter 10) and immigration (Chapter 25), incarceration (Chapter 23), and people living with disabilities (Chapter 26) and through work in socioeconomically disadvantaged communities (Chapters 7, 11, 12, and 14). Methodologies used in these projects also prioritize empowerment; community-based participatory action, inclusion of diverse stakeholders, and community feedback were common in case studies throughout the *Handbook*.

A related theme is context. Community psychology originated to address sociocultural issues, and the field's paradigm includes the interaction between individuals and their environments, as understanding social and physical ecology is essential to understanding human behavior and finding solutions to persistent and contemporary challenges. The complexity of the challenges described within the *Handbook* necessitates a multilevel, multisystemic approach that incorporates an understanding of the human, environmental, and historic contexts. Cultural context also impacts interpretation and responses to social challenges, which the *Handbook* highlights by outlining different conceptualizations of wellness around the world (Chapter 5). The EnRiCH program described in Chapter 12 involves community-based participatory research between at-risk communities and institutions and includes asset-mapping to improve adaptive capacity for disaster response. For example, the lack of mental health facilities in Ghana, paired with the cultural conceptualizations of mental illness and religious beliefs within the country, provided an impetus to explore faith healing camps as platforms for mental health support. In fact, many of the case studies in the *Handbook* begin with a description of the communities in which the research is embedded — their histories, social and economic tensions, and physical environments.

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The *Handbook* also prioritizes applied and interdisciplinary work, as suggested in the subtitle. Intertwined throughout the book is community psychology's relationship with disciplines spanning the environment, education, gender, public policy, neuropsychology, and religion. Mental health of adolescents and college students is directly discussed in Chapters 15 and 27, but is also threaded throughout, as within discussions of the impact of social media (Chapter 19) and historically marginalized groups (e.g., Chapters 26 and 28). Education, government and public policy, and public health are commonly part of the scope of community psychology work, and are heavily represented in the *Handbook*, from examples of local community engagement to revitalize Flint, Michigan (Chapter 11) to improving equity in higher education (Chapter 20) to better understanding the impact of incarceration through a public health model (Chapter 23). The physical environment is increasingly included in community psychology research, including applied research to promote community action after environmental disasters, like in Flint, Michigan (Chapter 11), to promote community resilience following disasters in under-resourced settings in Canada (Chapter 12), and to understand the impact of climate change on migration and issues of social justice (Chapter 21).

A fourth theme — inclusivity — is exemplified throughout the *Handbook,* as research spans geography, age, gender, ethnic and racial identity, country, and religion. Research involves local communities (e.g., Chapters 11 and 28), schools (Chapters 7, 8, and 27), and incarceration (Chapter 23). Rural communities (e.g., Chapter 7) are represented as well as urban communities (Chapters 11, 14, and 24). Though many chapters focus on communities in the USA, some offer general global perspectives (e.g., Chapters 5 and 26), while others describe research in Ghana (Chapter 18) and Australia (Chapter 22), or situational analyses of climate impact in multiple countries (Chapter 21). Inclusivity is also highlighted through examples of culture-centered research to improve academic performance (Chapter 6) and through work confronting discrimination of LGBTQ+ communities (Chapter 28) and women in leadership (Chapter 10). The last example also introduces intersectionality into the broader community psychology landscape of the *Handbook*, by providing examples of women in leadership of different ethnicities, races, and sexual orientations. Chapters are also written by researchers who span the globe, from Peru to Ghana, to Canada, Australia, Japan, and South Africa.

A final theme of community psychology is the promotion of wellbeing or wellness, considered as a holistic stability or homeostasis across a system. Within the *Handbook,* wellness within an individual (human) system includes physical, environmental, financial, occupational, social, emotional, spiritual, intellectual, and sexual dimensions that positively affect physical and mental health and quality of life (Chapter 5). Individual wellness is impacted by interpersonal interactions, which themselves add complexity to the wellbeing of larger systems like families. On a larger scale, community wellbeing requires balancing the needs of individuals and multiple smaller systems like neighborhoods and schools (Chapter 16) in a way that optimizes common good and individual autonomy (Chapter 22) while minimizing tensions between the systems.

As outlined in Chapter 5, wellness incorporates the theme of context, as culture impacts values and lifestyles, which in turn influence, for example, how communities support neurodiverse community members (Chapter 26) or leverage institutions like faith camps (Chapter 18) or experiences of migration (Chapters 6, 25). The theme of wellness is applied throughout the *Handbook*, which makes clear its relationship to all the themes outlined above. By empowering individuals and communities, these systems can advocate for their needs to be met. For instance, the Gowanus Canal Community Advisory Group was able to use public policy to direct local development in ways that support the interests of community members (Chapter 16), and the Newark Anti-Violence Coalition demonstrated the ability of a democratic collective to leverage local resources to address neighborhood violence (Chapter 14). In both examples, success required incorporating stakeholders from across communities, as solutions to complex community problems require the inclusion of diverse community members. Individually, wellness as a community member is facilitated by having a voice in community decisions. Finally, wellness is interdisciplinary, as implied by its nine dimensions featured throughout the *Handbook*; examples include environmental (Chapter 12), physical (Chapter 17), and financial (Chapter 13) components.

After a broad examination of current research, the *Handbook* ends with two chapters suggesting gaps and future directions for community psychology. Focusing on research from the early 2000s and her observations while developing the *Handbook,* the editor proposes that the reality of the research in the field does not yet match the aspirations of social

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action and empowerment and calls for the field to place even greater focus on the themes mentioned above. Though the research described throughout the *Handbook* includes examples of community action and promotes equity, constant reflexivity is also essential to community psychology and critical reflection illuminates areas for improvement. The editor provides practical suggestions for how to change the narrative moving forward. Particular topics, including scale development, disasters, climate change, social media, crime, and social policy are also presented as less studied areas that would benefit from future research. In this way, the author bends the narrative back to defining community psychology while also providing a path forward for the field.

BOOK REVIEWS – CONTINUED

Review of Seligson, Kenneth E. *The Maya and Climate Change: Human-Environmental Relationships in the Classic Period Lowlands. Interdisciplinary Approaches to Premodern Societies and Environments series.* New York: Oxford University Press, 2022. ISBN (hardcover) 9780197652923.

By Vernon L. Scarborough, University of Cincinnati

The House the Maya Built

Since the early-sixteenth century entradas by Cortez and his peninsular kingdom, the ancestral Maya of the Yucatan Peninsula have confounded early scholarship while exciting numerous sensationalists. It was not until a couple of decades prior to our Great Civil War of the mid-nineteenth century, that a broad public was introduced to a more accurate set of snapshots of what Maya civilization may have looked like. Nevertheless, since those popular volumes by Stephens and Catherwood, much in the way of media assessment continues to couch the Maya in an aura of mystery and intrigue. Kenneth Selgison has crafted a well-written and thoughtful synthesis of what contemporary archaeology has now come to understand about this resilient and complex society through time and within their varied mosaic of managed environments.

Although the volume spends time on what happened to Maya civilization during its great fragmentation following more than 700 years of growth and accomplishment, the focus of attention is clearly the Classic Period (200–800 AC). He suggests that a continuous fascination by the popular press on the ancestral Maya as mysterious and exceptional can result in an overly romantic image of whom they were and what they achieved with even exoticism the takeaway. Perhaps the emphasis placed on the ninth- and tenth-century "collapse" of the Classic Maya, a highly significant downturn critically reviewed by much of the recent past and current scientific literature, has overshadowed both the practical and highly innovative ways that the Maya sustained themselves in coping with a subtropical landscape. The author incorporates an approach to assessing the nonlinear arrival, colonization, establishment, and curtailment of aspects of their civilization, a more generalized model now employed by both the sciences and the social sciences—"resilience theory"—in best explaining the changes impacting the society and its biophysical environs.

At the outset, he shows that the pace and locations of transition differed at the local and regional level in emphasizing society's complexity. Although not developed here, the rapid organic "turnovers" in a seasonally constrained, "wet-dry" forested setting, a condition found in much of the Maya Lowlands, made human alteration of the landscape tricky. Nevertheless, by drawing on lesson learned during times of resource overexploitation, longevity and resilience prevailed. By the Late Preclassic Period (300 BCE–200 AC), considerable colonization efforts had already resulted in the establishment of long-lived Maya socioecological institutions. However, with the advent of drought-like conditions and overuse of resources associated with spiking population growth, several large communities were significantly abandoned or were forced to reorient their consumption practices. This learning curve was institutionally internalized resulting in a set of Classic Period landscape management approaches emphasizing the notion of "harvesting" rather than" exploiting" (my language, not necessarily the author's). Innovative Late Preclassic intensification practices were clearly continued, but more closely monitored. The role of raised planting beds in proximity to sizable wetlands—internally draining "bajos"—or near low-lying, slow-moving stream systems were widely expanded during the Classic Period, as were the erosional control and field plots of terraced hillside surfaces. The harvesting of conserved and domesticated plant varieties as well as non-domesticated animal populations was thoughtfully controlled at the household level, knowledge passed from generation to generation. Even today, the durability of these engineered landscapes continues to reflect decisions made by the ancestral Maya, but now incorporated into contemporary lifeways alongside modern technologies. Traditional Ecological Knowledge is alive and well, with methods and techniques worthy of reintroduction and assessment where overexploitation and climate change impacts are challenging our global food supplies.

Throughout the volume, the degree of stability and instability inherent in climatic assessments is interwoven. The ca-

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pricious amount and distribution of precipitation seasonally as well as through deep time is a fundamental force in the kinds of decisions made by the Maya. Sometimes called a "green desert," the mosaic of environments occupied required significant alterations to accommodate the projected 10 million souls living there by the late Classic Period. Because five months of the year were frequently without rainfall, cities as large as Tikal, Calakmul, and Caracol, each approaching populations of perhaps 100,000, to the smallest hamlet of a half-dozen house mounds, required water storage facilities. Although in the more arid northern peninsular settings, the freshwater table was frequently elevated with the natural formation of limestone sinks—cenotes—providing year-round potable water access, this was seldom the case in the southern Maya Lowlands. Water-management urban hubs like Tikal or Caracol are shown to reflect archetypical gravity-flow reservoir catchment systems infilled from seasonal runoff over elevated and well-maintained plaster surfaces. Dubbed "convex micro-watersheds," these cities provided their immediate urban residential core as well as visiting dignitaries, merchants, and pilgrims potable water shed from sizable public plazas as well as the several central precinct pyramids, acropolises and ballcourts identified from within the larger Classic Period centers. Recent studies further indicate the role of water filtering functions given the "open-air" catchment surfaces recharging these storage tanks. At both the lower margins of the largest centers as well as in proximity to small farmsteads, proportionally scaled reservoirs were used to irrigate fields systems during the driest periods of the year.

The book provides the reader clear descriptions of the methods and techniques used by current archaeology for assessing how and why we know what we know about the "house the ancient Maya built." From the pivotal role of lime production derived from the limestone bedrock for all things paved and architectural to the breakthrough technology of LiDAR (Light Detection and Ranging) in mapping through the jungle canopy, the author's explanations summarize many of the recent scientific advances now driving archaeological interpretations nearly everywhere. That said, the focus for the volume remains clearly in the realm of the subtropics.

This is a fine contribution to our greater understanding of the ancestral Maya. For several recent decades, seminal studies have worked to decipher what the preserved, carved, and painted record of their ancient past is now telling us. Much has been revealed by way of elite worldview from the epigraphic and iconographic remains. Today, and perhaps during the last two decades, a complementary engagement with the biophysical world is now revealing another level of fundamental knowledge institutionalized at the socio-environmental level. Without the use of the wheel or the pulley, functional metal tools, beasts of burden or even the likely use of the navigational sail, the Maya engineered a resilient and sustainable landscape that warrants thoughtful reflection. Given their societal longevity, and in the context of our own uncertain futures, Kenneth Seligson's synthesis allows for another way of looking at our now struggling blue-green planet.

BOOK REVIEWS — CONTINUED

Review of Helgren, Jennifer. *The Camp Fire Girls: Gender, Race, and American Girlhood, 1910–1980.* **University of Nebraska Press, 2022. 372 pp. ISBN (hardcover) 978-0-8032-8686-3.**

By Cheryl Weiner, Lesley University

Girls' youth movements hold a special place in the fabric of American history. Dating back to the early twentieth century, they have played a formative role in shaping girls' social identities and their sense of self. Jennifer Helgren brilliantly chronicles the history, origins, and evolution of the Camp Fire Girls*,* one of America's longest-serving girls' youth movements, in her newly released book, *Camp Fire Girls: Gender, Race, and American Girlhood, 1910–1980.* She calls attention to historical research, including photographs and oral and written communications, that chronicles the origins of the movement, its impact on girls' lives, and how it adapted to and resisted dominant ideologies about girls, culture, and race across time. Helgren highlights how the movement's mission and the populations it served changed over the decades and the internal tensions that ensued.

According to Helgren, Camp Fire Girls' groundedness in white, middle-class values, and the constantly changing possibilities of who girls were and could be, posed constant challenges to its mission. These challenges are not unique; they were experienced within the feminist movement and within girls' studies and feminist scholarship, which first centered on the experiences of white, middle-class girls and women, then focused on non-white girls from a problematizing perspective, and later included racial and sexual diversity in all its forms.

In the first chapter, Helgren describes how Camp Fire Girls was seeded in 1910 by Charlotte and Luther Gulick, a physician and physical education expert, who were parents to four daughters. They endeavored to instill a sense of "essential feminism" in white, middle-class girls ages twelve to twenty during a time when their home-making responsibilities were being lost to the forces of industrialization. The Gulicks sought to create a "new kind of young woman" who existed in the liminal space "between school and the home" (p. 2). Incorporated in 1914, Camp Fire Girls wedged itself into the emerging female youth space, glorifying the art of homemaking, self-education, and community service by bringing girls together, irrespective of race, religion, and class, to enjoy "feminine" outdoor activities such as camping and hiking. Girls received "honor beads" for achieving proficiency in these and other domestic tasks.

Camp Fire's mission expanded and extended notions of girlhood by providing participants with practical skills training and health education in a community-oriented setting. While its membership predominantly extended to white, middle-class, Protestant girls, its commitment to diversity was revolutionary for its time. Camp Fire Girls' progressive model of education was also hailed and supported by leading youth experts and philanthropists, including G. Stanley Hall and Jane Addams, among others.

As a service-oriented movement, Camp Fire aimed to instill a sense of national duty and patriotism in all participants. During World War I, Camp Fire Girls accommodated rapid expansion through its "Minute Girl" program, which allowed girls to register directly with the organization to support war-time activities, providing new opportunities for "healthy, useful girl citizenship" (p. 50) among girls. At one point, more than 700 girls joined each month, and they earned more than 1,500,000 service badges among them by caring for working women's children and assisting with wartime fundraising.

However, the model was not unflawed. Helgren points out that The Camp Fire Girls often fell short on its mission to promote a colorblind ideology. The program appropriated Native American imagery and later mythologized aspects of Gypsy culture to foster a sense of community and belonging in girls and to evoke their inherent relationship with nature. Helgren explains, "Camp Fire leaders believed that individuals could reach a deeper level of spirituality by accessing what they assumed were primitive emotions" (p. 60). Program ideology encouraged girls to gather around campfires, wear Native American-style ceremonial dresses, and adopt Indian sounding names, while ignoring the lived experiences of Native American participants who had been absconded from their land and placed in residential schools. "Wohelo," an acronym of the words "Work, health, and love," served as the movement's watchword.

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In Chapter 3, Helgren identifies how elements of socioeconomic and racial elitism further pervaded Camp Fire culture. She observes that "Camp Fire was not as open to all girls as its founders asserted" (p. 90). Participation costs were high, and Camp Fire was "not a charity," a point made in the 1914 *Book of The Camp Fire Girls*. In addition to membership fees, girls were required to purchase uniforms, buy membership booklets, and pay for camping trips. The movement believed that it could help immigrant and disadvantaged girls overcome the hardships of their circumstances by Americanizing them and training them to become more like white, middle-class girls.

In the World War II era, Camp Fire girls traded in their Native American-sounding names for patriotic ones. Girls babysat, taught food conservation methods, and helped in factories, jobs that they would cede to men upon their return from service. Camp Fire's popularity grew among younger girls, who were called the *Blue Birds.* Camp Fire girls were known for their all-American looks and patriotism.

As threats of facism loomed large in the post-war period, Helgren indicates yet another shift to Camp Fire's ideology. Under the leadership of Luther Scott, the movement began to align its values with theocratic religions, as evidenced by the inclusion of "worship God"' into Camp Fire Law in 1942. The movement developed materials for use with Jewish, Protestant, and Catholic populations. Girls could also earn honors for participating in religious-based activities, which created yet another type of idealized girlhood.

While the 1950s and 1960s ushered in new possibilities for girls and women, Camp Fire maintained that girls' primary purpose was to become knowledgeable homemakers, a manifestation of their biological destiny. Whereas other programs leaned into the feminist era, Camp Fire retreated from it. Camp Fire began to offer lessons on beauty, dieting, and dating, including "Dates with Dad." Girls also learned vocational skills in case they needed to support themselves or to provide supplementary income to their families.

Helgren notes that Camp Fire remained a largely white-centered movement in the 1960s, even with the establishment of the Metropolitan Critical Areas Project (MCAP) in the 1940s, which aimed to increase membership among girls of color and girls with disabilities. Structural racism meant that white groups were given preferential treatment over Black groups, and that Black leaders were left out of critical decision making. Segregation was upheld in cities where it remained, and Camp Fire made little effort to facilitate or to promote cross-racial groups.

Helgren explains how the next few decades would reflect additional changes. In the early to mid-1970s, Camp Fire lost more than 100,000 members due to rising rates of divorce and changing interests among American youth. Camp Fire began to focus on building "character education" in disadvantaged youth of all ages. These programs were grounded in a white, middle-class framework, and failed to acknowledge individuals and organizations who were already doing this work. In 1975, Camp Fire launched the New Day program, which gave local groups autonomy over their own groups. In 1983, Camp Fire changed its name to Camp Fire Boys and Girls. It now operates on an international level and serves disadvantaged youth through a host of year-round programs.

The Camp Fire Girls: Gender, Race, and American Girlhood, 1910–1980, is a must-read for anyone who is interested in understanding the history of youth movements, how girls' identities are shaped by them, and how they are influenced by the social contexts around them.

BOOK REVIEWS – CONTINUED

Review of Rajabi, Samira. *All My Friends Live in My Computer: Trauma, Tactical Media, and Meaning.* New Brunswick: Rutgers University Press, 2021. 157 pp. ISBN (paperback): 9781978818958.

By Scott Tulloch, Borough of Manhattan Community College, City University of New York

Rajabi (2021) argues digital media platforms generate novel opportunities for sufferers of trauma to make sense of their experience. Rajabi's perspective hinges on an expansive "de-medicalized" definition of trauma, to include "all those experiences that dismantles mean-making schema and call into question the social, cultural, and physical understandings of how differing bodies and identities fit into the cultural world" (9). Digital media platforms provide space for sufferers to reconstruct meaning-making schema, a sense of identity, and belonging in community. Furthermore, digital media enable sufferers to position themselves relative to normative constructs and engage in "micro-political acts of resistance" (128).

Rajabi forwards a secondary argument, presenting an innovative conceptualization of "symbolic trauma" that builds from Bourdieu's (1989) notion of symbolic violence. The concept describes an experience of trauma caused by symbolic violence, often by institutions and systems of control. While these wounds are symbolic, they are nevertheless embodied and have material effects. The concept of symbolic trauma invites overt political analysis and attends to the erasure of a range of traumatic experiences neglected by medicalized definitions (16–17).

The monograph is divided in two parts. Part one details theoretical arguments and surveys literature across three chapters. Rajabi introduces the theses and provides an outline of chapters in the first chapter. Rajabi highlights her conceptualization of symbolic trauma, situating the concept within literature of trauma studies, in the second chapter. Rajabi focuses on narration of trauma in media, contrasting legacy media with new affordances of digital mediatization in the third chapter.

Part two consists of three cases studies. Rajabi, in the first case study, analyzes online discourse surrounding the trauma of Jennifer Merendino, who died of metastatic breast cancer in 2011. Angelo Merendino, Jennifer's husband, mediated their suffering in raw photojournalistic style by posting regularly to a blog entitled *The Battle We Didn't Choose.* Angelo's photographs of Jennifer, their articulations of grief and suffering were remediated globally, spread as memes across a variety of social media platforms, and presented in online news outlets and a TED talk delivered by Angelo. The Merendino's testimony helped them make sense, create a community of support, and enabled observers to experience vicarious trauma and empathetic witnessing.

Rajabi, in the second case study, maps transformation of meaning-making schema following the injury of Kevin Ogar, an amateur CrossFit athlete, during a competition in 2014. Ogar's injury occurred while performing a snatch, which involves lifting a weighted dumbbell from the ground to an overhead position in a fluid motion. Video of Ogar's injury quickly spread across social media. The images entered mainstream news media, which frequently criticized CrossFit for putting athletes at risk. The CrossFit community was galvanized by the incident and indictment from outside, forming crowdfunding initiatives to support Ogar's medical care. Ogar, through YouTube and various social media outlets, shared his recovery experience and reengagement with CrossFit as an adaptive athlete in a wheelchair. Ogar became personified in the hashtag #OgarStrong and a stylized meme, featuring a silhouette of Ogar's recognizable red hair and beard integrated into the iconic Superman logo. The CrossFit community mediated a narrative establishing Ogar as a symbol of heroic inspiration and embodiment of triumph over pain, reinforcing CrossFit's central values. This case study is particularly important for its representation of contradictory dynamics, emphasizing the way sufferers utilize digital spaces as a resistive act, to articulate alternative meanings, while also commodifying and reifying the ethos of a cultural group that may contribute to further harm.

Rajabi, in the third case study, describes digital responses of Iranian American diaspora to the symbolic trauma of Executive Order 13769, commonly referred to as the "Muslim Ban," which suspended entry into the United States for citizens of Iran, Iraq, Syria, Yemen, Libya, and Somalia. Digital media become repositories for suffering caused by the ban. Rajabi

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maps digital meaning-making across five noteworthy social media presences, including: Maz Jobrani, a prominent co-median that frequently appeared on *The Late Show with Steven Colbert*; Banned Grandmas, an Instagram feed started by Holly Dagres after recognizing the popularity of an image she posted of her grandmother on Twitter with the hashtag #grandparentsnotterrorists; Diaspora Letters, an Instagram feed that features Beeta Baghoolizadeh's black and white line drawings representing her diaspora experiences; Before we Were Banned, an online/offline art show that solicited art in response to the ban on Instagram; and Trita Parsi, head of the National Iranian American council. The case study demonstrates how sufferers cope with and tactically engage symbolic trauma through mediation, by going online to perform acts of micro-political resistance by circulating their own meanings, creating space for alternative discourses and communities to exist.

Rajabi, in *All My Friends Live in My Computer*, offers significant contributions to the fields of trauma and media studies. These contributions are even more relevant with public proliferation of the concept in the wake of the COVID-19 pandemic, ongoing mass shooting and racialized violence. The core strength of this monograph resides in the case studies detailing the myriad of creative ways sufferers represent, make sense of trauma, and engage in meaningful coping processes through digital media. In addition, Rajabi demonstrates an impressively coherent method for analysis of dispersed digital mediated texts, which could serve as a model for future research in digital culture and media studies. These descriptive and methodological strengths, best represented in the first two case studies, warrant acquisition of this text and attention from audiences interested in trauma and digital media studies.

The monograph takes on autoethnographic narration at times. Rajabi situates herself as a sufferer familiar with experiences of trauma, as an Iranian American living through the "Muslim Ban," a patient undergoing ongoing treatment for a brain tumor, and a daughter grappling with her mother's cancer diagnosis. Rajabi carries an authentic urgency and palpable sense of care in her voice that underpins the argument and reinforces the case studies.

There are limitations worth noting. Rajabi's notion of symbolic trauma is well justified and theorized in part one of the text, unfortunately the phenomenon is less fleshed out in case studies. The first two case studies are examples aligned with traditional medical conceptions of trauma. Only the third case study, focusing on the "Muslim Ban," directly engages the notion of symbolic trauma. The case study has breadth, in the analysis of five prominent social media presences, but lacks the cohesion and depth of the previous case studies that more comprehensively mapped ongoing responses and remediation to demonstrate processes of meaning-making, identity and community formation. More support and additional case studies are warranted to demonstrate digital practices in response to symbolic trauma. Lack of development in case studies to support this concept undermines one of the most significant, leading-edge contributions of the text. Despite these limitations, the book is original, worthy of acquisition, and close reading by audiences interested in the intersections of trauma and media studies.

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