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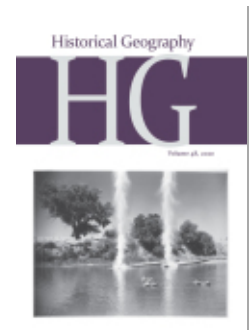
## Public Pedagogy and the Wagner Free Institute of Science in Progressive-Era Philadelphia

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# PUBLIC PEDAGOGY AND THE WAGNER FREE INSTITUTE OF SCIENCE IN PROGRESSIVE-ERA PHILADELPHIA

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**ABSTRACT:** Unless collapsed into what we call public space or the public sphere, public pedagogy has been infrequently studied in geography. As with all forms of the public, its emergence and form vary greatly across time and space, and must be understood in its particular invocations. This article contributes to a historicized understanding of public pedagogy by analyzing the pedagogical activities of the Wagner Free Institute of Science in North Philadelphia in the Progressive Era. Incorporated in 1855, the Wagner Institute continues to this day as a center of free science education for children and adults, while also serving as a museum of nineteenth-century science. This article, based on research in the Wagner Institute's archives, focuses on the manner in which institute officials sought to make their pedagogical aims public. This not only sheds light on the cultural politics of education in the Progressive Era but also helps ask important questions about the public forms pedagogy has taken and might continue to take. The purpose is not to ask what public pedagogy necessarily is but how it has been enacted in a certain time and place, to what ends, and with what constraints.

**KEYWORDS:** *public pedagogy, Progressive Era, Philadelphia*

At the corner of Seventeenth and Montgomery Avenues in the city of Philadelphia rests the Wagner Free Institute of Science (hereafter Wagner Institute), a National Historic Landmark characterized as “an unparalleled survivor of a virtually extinct institution: the scientific society of the nineteenth century.”<sup>1</sup> The Wagner Institute was officially incorporated in 1855 by Philadelphia merchant and philanthropist William Wagner, based on his vast collection of minerals and rare fossils. Wagner's vision for his institute was primarily to be a center for public adult science education “free to all male and female” on subjects

he deemed would “tend to improve and elevate the working classes in the city of Philadelphia.”<sup>2</sup> For the thirty years preceding Wagner’s death in 1885, the Wagner Institute served precisely this function, with well-attended lectures in the natural sciences on a nightly basis. Wagner’s death unlocked significant funds, dedicated in his will, to use by the institute’s board of trustees to enlarge it in size, subject matter, and domain in the ensuing decades. At its apogee in the late nineteenth and early twentieth centuries, the Wagner Institute was a globally recognized research institution, natural history museum, and center of free public science education. The Wagner Institute remains a public science education institution today, offering free science classes to children and adults through a range of contemporary science topics. It is also committed to preserving the building and collections, while interpreting them in the context of the history and development of scientific research and education in nineteenth-century America.

In addition to the Wagner Institute as an object of study itself, this article explores what it tells us about public pedagogy in the context of Progressive-Era Philadelphia. Geography has been as quiet on the topic of public pedagogy as it has been vocal on the topic of public space. If most academic geographers see public space as geographically and historically contingent, the same can be reasonably said for public pedagogy.<sup>3</sup> Outside of geography, critical analyses of public pedagogy have recognized that it must be studied in its particular moments and invocations, not as an umbrella term, lest we obscure how access to various ways of knowing the world (epistemes) are differentiated across time and space.<sup>4</sup> The Wagner Institute provides an interesting historical example of how Progressive-Era public pedagogy intersected with one such episteme—science—with all the attendant complexities of its geographic distribution.<sup>5</sup> The spatiality and contextuality of all *ways of knowing*, including science, bring up specific complexities with regard to how the Wagner Institute enacted the “publicness” of public pedagogy. In other words, the relevant question is not so much *whether* the pedagogies of the Wagner Institute can be understood as public but the *mode* and *manner* in which they were. The story of the Wagner Institute is also interesting for myriad reasons impossible to cover comprehensively in this article. It was not only influenced by the public education movement of the nineteenth century, it became an active agent in the cause, serving as a local chapter of Philadelphia’s University



FIG. 1. Wagner Free Institute of Science, ca. 1900. Wagner Free Institute of Science Archives. Used with permission.

Extension Movement and early public library system (more on those later). Upon Wagner's death, his nephew, Samuel Wagner, became the chairman of the board of trustees. The board appointed as the chair of faculty Joseph Leidy, a renowned biologist and natural scientist of the nineteenth century. Leidy enlarged and reorganized the museum along basic geologic and evolutionary principles (which remains today as it was then), enlarged the faculty, and helped build an original research program.<sup>6</sup> The latter produced important paleontological research in Florida in the late nineteenth century. The Wagner Institute had regular contact with other prominent science museums of its era, including the Smithsonian, and public libraries across the world often contacted the Wagner Institute for copies of its *Transactions of the Wagner Free Institute of Science*. The records of these activities have been preserved in the Wagner Institute's archives, which until now have been relatively unexplored (fig. 1).

This article explores the complexities of science education as part of the public domain through the example of the Wagner Institute, based

on archival research conducted at the Wagner Institute during the summer of 2017. The ensuing section of this paper reviews the literature in geography on public space, especially as it pertains to a more thorough engagement with public pedagogy. It does so in a way that shifts the question from what is or is not public, to how *publicness* is enacted and to what ends. The third section of this article sets the historical context of Philadelphia in the Progressive Era, at least where necessary to inform the analysis of the Wagner Institute's public pedagogy. The fourth section picks up the story of the Wagner Institute with William Wagner's death in January 1885. In particular it explores how Wagner Institute officials dealt with problems of taxes (stemming from legal questions about its charter), questions about which educational practices—liberal or vocational—best served the public interest (however defined), internal debates about gender and hiring practices, and how its naturalist and positivist epistemologies may have informed its vision of the public good. These topics help shed light on the manner in which the pedagogies of the Wagner Institute in the Progressive Era might be understood as public.

### PUBLIC SPACE AND PUBLIC PEDAGOGY

While geography has had much to say about public space, it has had relatively little to say about public pedagogy.<sup>7</sup> The latter has more typically been covered in cultural studies and educational studies, but even there it has been approached either in scattershot fashion or as a concept in need of clarification. Recognizing this problem, Sandlin, O'Malley, and Burdick break public pedagogy scholarship down into five basic categories.<sup>8</sup> The first includes research on the reformist public education movement of the late nineteenth and early twentieth centuries in the United States; while the time period makes it relevant to this study, the movement had more to do with unmooring all public education from the church and directing it toward democracy and nation-building, as theorized by John Dewey.<sup>9</sup> The Wagner Institute, on the other hand, attempted to carve a separate space for open-access higher education. The second involves research on popular culture as an educational force, most notably the vast, ongoing scholarship of Henry Giroux.<sup>10</sup> The third involves informal institutions and public spaces as alternative sites of pedagogy, such as museums, parks, and public art. Geography has done

a great deal of work on such sites, if not perhaps explicitly connecting it to pedagogy, and this category is the most relevant to the present research. The fourth concerns how dominant discourses construct the public; geography's vast and deep literature on neoliberalism would fall into this category, if, again, not necessarily put in terms of public pedagogy. The last category of public pedagogy scholarship Sandlin et al. outline is that of public intellectualism; while geography has its share of public intellectuals, the topic itself has received only scant coverage, and is only tangential to this article.<sup>11</sup>

How might we connect this broad framework to the geographic literature on public space? My approach to this is to think through how critical understandings of the "publicness" of public pedagogy maps onto geographic analyses of public space. Biesta, for instance, stresses the difference between public pedagogy *of* the public, *for* the public, and *in the interest of* recreating publicness. The latter is the most critical as, following Hannah Arendt, he maintains that the public is not a place but an ongoing political practice of freedom.<sup>12</sup> We see this distinction between public space as a material object of contestation and publicness as an always emerging potentiality throughout geography. Mitchell, for instance, uses Henri Lefebvre's concepts of representational space and representations of space to analyze the struggle over People's Park in Berkeley, California.<sup>13</sup> Domosh, on the other hand, argues that despite its theoretical nuance, Mitchell's analysis still directs our attention to high-profile events in well-known places at the expense of understanding everyday practices. In contrast, she argues that public space is never fully open or closed, but constantly mediated as the norms and practices that govern its use are challenged and negotiated through seemingly discrete acts of resistance.<sup>14</sup> Similarly, pedagogy is not simply the sum of what goes on in schools but what informs our learning through all aspects of our lives, all the time. Like politics, ideology, culture, and so on, pedagogy is not strictly identifiable through obvious events and institutions, but saturates our daily experience.<sup>15</sup> Schools are institutionalized pedagogy, and any mobilization of public pedagogy is an organization of pedagogic experience that is not easily interpreted along traditional notions of public and private. Rather, it is a claim, or a representation, of what the public is, or should be. Thus, what Terzi and Tonnelat recently observed about public space—that it is better understood as an act of

becoming public (publicity) rather than a literal place—can also be applied to pedagogy.<sup>16</sup>

In certain ways Dewey's prolific writings on the value of public education for democracy bear witness to this inextricability of pedagogy and the public sphere. At the turn of the century, for instance, Dewey argued that in the social function of the school, "individualism and socialism are at one," meaning that concern for the individual and concern for society at large are commensurable (not socialism in the conventional political sense of the term).<sup>17</sup> He refined these arguments in his more well-known treatise *Democracy and Education*: "Not only does social life demand teaching and learning for its own permanence, but the very process of living together educates."<sup>18</sup> Dewey argued not only that education matters for social life but that social life impacts education, for learning happens both in and out of schools and never in a vacuum. Dewey's normative vision of public education, however, is more "of the public" and "for the public" than "in the interest of publicness," to use Biesta's terms, and as such reflects the liberal understanding of the public sphere critiqued by Jurgen Habermas and Hannah Arendt.

Habermas argued that the public sphere in Europe arose as a buffer between the state and the bourgeois class. It purported to be a free and open space of public discussion, but as Habermas observed, it was in fact structured upon numerous classed, raced, and gendered exclusions. The structural transformation that Habermas outlines is one in which, by roughly the Progressive Era, socially disadvantaged groups gain access to the public sphere and demand state recognition to address their grievances. It is also in this transition that consumer culture develops as a means for people to secure their sense of moral worth and dignity as private citizens (think of the turn-of-the-century work of sociologist Thorstein Veblen in this sense).<sup>19</sup> This was only possible, however, as the interests of various groups are "bracketed," meaning that relations of inequality and dependence are provisionally disregarded in order to give the semblance of equal ground. The pivotal question then becomes whether this provisional, contingent (indeed, imagined) equality serves a positive purpose in advancing the causes of citizens, or prevents those inequalities and dependencies from being fundamentally recognized and challenged. Habermas recognized the latter, but writing in the chaos of postwar Germany, he still advocated the normative potential

of the public sphere.<sup>20</sup> Arendt, on the other hand, argued that the public sphere is not simply a conduit through which already free private individuals express their preference but is in fact the space of freedom itself, as citizens become fully human by acting as political beings. The public sphere is only public if its publicness is constantly reproduced. Biesta's description of "publicness" derives from Arendt's normative vision of the public sphere. Dewey's normative vision of public education, even if it understood the spatial fluidness of pedagogy, was intended to create a certain kind of pupil, one that would both resist the rapidly expanding consumer culture of its era and fill his or her civic duty more adequately, toward a more unified democracy. To the extent that this implies that bracketing (while not Dewey's term) yields a healthier public sphere, Dewey's project was in part about nation building. Producing certain types of being or ways of knowing toward a healthier nation exists in tension with the practice of public freedom sought by Arendt.

Thus, not only is the very dichotomy of public and private life structured on systems of domination, particularly but not only gender,<sup>21</sup> an uncritical notion of public pedagogy potentially obscures the multiple modes of knowing and access to knowledge concurrent with the disparate social realities of the public sphere.<sup>22</sup> In other words, invocations of "the" public in the singular tend to work in service of the state. Take, for instance, Kohlsted's characterization of the new museum movement (approximately 1880–1925) as a "potent force for promoting national self-consciousness."<sup>23</sup> The collection of far-flung artifacts for the ostensible purpose of public science education was a material practice complicit in the construction of an imagined national community.<sup>24</sup> George Brown Goode, curator of the Smithsonian Museum at the time, advocated the pedagogical value of museums on grounds that they could satisfy the "needs of the mechanic, the factory operator, the day laborer, the salesman and clerk, as much as the professional man and the man of leisure."<sup>25</sup> He thus characterized a diverse public sphere in terms of occupation but exclusive of women and Black people, and which can be satisfied by a single way of knowing promoted by the state. The Smithsonian in particular was arguably as much a museum of national empire as it was of natural history.<sup>26</sup>

Given such a critique, how do we best analyze something as individual and experiential as pedagogy in terms of publicness? We might, after all, look at Goode's invitation of professionals from different walks of



life, similar to William Wagner's perspective quoted earlier, as an example of a liberal notion of bracketing, wherein various bracketed publics are said to have equal access to the public sphere. In contrast, Fraser famously argued that while the normative potential of the public sphere should not be abandoned altogether, this notion of bracketing was insufficient, and that a multitude of counter-publics (rather than bracketed publics) should be embraced.<sup>27</sup> Fraser's argument about the public sphere pertained to her examination of actually existing, rather than normative, democracies. Hence, rather than thinking about pedagogy and publicness in the abstract, it makes more sense to examine the question in real-world contexts, both geographically and historically. The project herein examines how the Wagner Institute sought to share its love of science with the public in Progressive-Era Philadelphia. More specifically, it focuses on the particular ways in which the Wagner Institute reflected and enacted public sphere politics in the terms outlined above.

#### PHILADELPHIA IN HISTORICAL CONTEXT

The Wagner Institute was founded on the northern rural outskirts of Philadelphia just prior to the US Civil War. Urban development reached the area during the peak years of Philadelphia's industrial era, between approximately 1880 and 1930. In the time period under study, the neighborhood of Seventeenth and Montgomery Avenues was a rapidly developing, primarily white suburb of a booming industrial city, known locally as "up-town." It was in the era of postindustrial decline that North Philadelphia became the African American heart of the city as it is known today.<sup>28</sup>

The manner in which the public sphere of Philadelphia evolved in this time period is particularly relevant. Recall that this period was, broadly speaking, congruent with the transition traced by Habermas from the bourgeois public sphere, structured on exclusion, to one in which various bracketed groups vie for public voice. For instance, in her study of nineteenth-century street parades in Philadelphia, Davis suggests that they were less directly state-managed than their European counterparts, and as such reflected the exclusions and bracketing of public space more clearly. To be clear, parades were not demonstrations of *the* public, as if it could be known in the singular, but examples of how publicness was

produced through contestation. Blacks were always and women were often excluded from nineteenth-century parades, and there was considerable anti-Irish sentiment in them. What Habermas called the bourgeois public sphere was marked by open public discourse about the need to rid street displays of perceived degeneracy among the poor and working class.<sup>29</sup>

In contrast, Warner's conservative reading of Philadelphia's history stresses the role of privatism as a normative, and specifically American, ideal. Warner argues:

For men [privatism] suggested Benjamin Franklin's model for a life course: a youth of self-discipline and hard work devoted to the accumulation of personal wealth, followed by a more leisurely middle age of comfort, public honor, and community service. For women it implied marriage, homemaking, and childrearing for such a husband, with the hoped-for later life of a comfortable home, well-settled children, and a community of family and friends.<sup>30</sup>

The privatist ethic Warner describes might be better understood as what Staeheli and Mitchell call a republican-virtue model of publicness; it prescribed the normative roles of people inside and outside the space of the home, the perfection of which leads to the good life.<sup>31</sup> Rather than seeing exclusion or bracketing as an instrumental function of publicness, Warner sees them as impediments to a homogenous public interest. He laments urbanization and immigration for leading to division and parochialism, and hence the decline of the public sphere. He considers the public education movement of the time as factory-style education administered by the state for the sake of efficiency, and instead lauds private schools and universities.<sup>32</sup>

Warner places the Wagner Institute in the latter category because it was privately owned, even if open to the public; his definition of public, at least when it comes to education, means state-administered. The public education movement was thus only one strand of a much broader movement toward public pedagogy, not least of which included the new museum movement discussed earlier. Like the museums, the public school movement had elite origins, but (part of) what Warner misses is that it had broad—some might say public—popular support. The bourgeois class liked public schools for the self-improvement they would pu-

tatively offer the poor; the capitalist class liked them for the production of semiskilled labor; and the poor and working class liked them for the scant promise of upward mobility.<sup>33</sup> State-administered is one way to define “public”—it would be pedagogy *for* the public<sup>34</sup>—but to suggest that state-administered projects cannot also be *of* the public is as ideological as saying that they must be. Whether a mode of education is public or not is a function of a number of variables, but ultimately what matters is the nature of the publicness their participants create.

Consider, for instance, the university extension movement of the Progressive Era, in which the Wagner Institute was an eager participant. It originated in two of the most elite universities in Britain, Cambridge and Oxford, with the express purpose of the intellectual self-improvement of the laboring masses. Even with such elite institutional settings there were individuals of a more radical persuasion (such as Michael Earnest Sadler of Oxford) who promoted extension, and at least some histories (if perhaps empirically underdeveloped) show more radical versions of university extension in Scotland and parts of continental Europe.<sup>35</sup> The movement’s entry into the United States was directly from Cambridge and Oxford, as University of Pennsylvania provost William Pepper communicated with Sadler and his colleagues on developing a university extension system in Philadelphia.<sup>36</sup> Pepper established the Philadelphia Society for the Extension of University Teaching in the summer of 1890. It expanded rapidly and by 1891 became the American Society for the Extension of University Teaching, with Philadelphia as its first chapter. At the same time that Edmund James, the president of the American Society, touted university extension as a way to put “new and worthy objects of thought into the lives of people who have been content to live on intellectual sloth and barrenness,” he also recognized the potential of university extension to prevent elite universities from falling out of touch with the needs and issues of the general public. He cited Cambridge and Oxford specifically in this regard.<sup>37</sup> The first local branch of the Philadelphia chapter was located at Saint Timothy’s Workingmen’s Club and Institute, about four miles northwest of the Wagner Institute (it is no longer there). The Wagner Institute became the second branch, and at least twenty-one others followed during the society’s first year (1890–91). In that year forty total courses were delivered to an audience of nearly sixty thousand, across all twenty-three branches.<sup>38</sup> But the origin of any particular movement

or engagement with public pedagogy is only part of the story—what matters perhaps more is how it played out on the ground, and how its participants enacted its publicness. Samuel Wagner embraced the idea of university extension because “the idea of a people’s college was one of the fundamental ideas that animated the founder [William Wagner] of this institution. University extension . . . is but another name of the same idea.”<sup>39</sup> The Wagner Institute also took part in the burgeoning public library system of the era (which also had its origins with Provost Pepper), for similar reasons.

### PEDAGOGY *OF* THE PUBLIC

As discussed above, Biesta distinguished public pedagogy that is “of the public,” “for the public,” and “in the interest of publicness.”<sup>40</sup> To refer to something as “of the public” means that it is a creation of whatever we consider, *a priori*, to be the public. But through what mechanism would the public create public pedagogy? The most commonplace answer might be the state, but that risks a problematic conflation of “public” with “state-administered.” Furthermore, the Wagner Institute had private, moneyed origins and maintained connections to other elite institutions. A letter of solicitation from the *Forum*, for instance, asked Samuel Wagner if the Wagner Institute might be advertised in a special edition on the best private technical and scientific institutes, and targeted to a readership described as “a well-to-do, intellectual class of people.”<sup>41</sup> But the Wagner Institute also relied on public utilities to supply water, and eventually electricity, to not only the institute but also the Philadelphia properties it owned. This section will look in more depth at how the Wagner Institute interacted with public structures that enabled it—and sometimes constrained it.

William Wagner died on January 17, 1885. Shortly thereafter, the board of trustees, including Samuel Wagner, Richard Westbrook, and Sidney Skidmore, established committees on instruction, museum collections, building, and finance. Aside from setting the schedule for spring lectures (advertised in the *Evening Telegraph*, the *Evening Bulletin*, the *Evening Star*, the *Evening Times*, and the *Evening Press*), among their first orders of business was improvement of their building and facilities at Seventeenth and Montgomery, including new display cases, arrangement of the museum, and other needed repairs (fig. 2). In May



FIG. 2: Wagner Free Institute of Science, ca. 1900. Wagner Free Institute of Science Archives. Used with permission.

1886 the board spent approximately \$2,000 to build sidewalks, which up to that point did not exist around the property. Improvements in the physical plant were *of the public* in the case of the institute's application for city electric service in 1891.<sup>42</sup>

Furthermore, though the Wagner Institute is the result of a private endowment from William Wagner, it was incorporated by the Pennsylvania state legislature in 1855. This state charter was further amended in 1864 to indicate that the institute could acquire any other properties that it needed to further its mission, and that any property would be free of taxation as long as it was used for the purpose of providing free education.<sup>43</sup> The Wagner Institute's primary source of income was from rental properties built during William Wagner's lifetime; by the time of his death, it owned approximately twenty-six houses throughout Philadelphia, renting for anywhere between twenty-five and forty-two dollars per month. The board of trustees was surprised in 1885 when the city of Philadelphia assessed taxes on all of these properties for 1884. Advised by their legal counsel, George W. Biddle, to "test the questions of taxes in the courts," the Wagner Institute

entered into a five-year legal battle over not only their tax liability but also the exact legal definition of their endowment.<sup>44</sup>

*The Wagner Free Institute of Science vs. The City of Philadelphia* provides one avenue through which to think about how pedagogy in this case is *of the public* even when initiated by a private actor. The Wagner Institute filed suit in the Philadelphia City Court of Common Pleas in 1885, arguing that the properties should be included in the tax-free endowment. Upon losing that case, they appealed to the Supreme Court of Pennsylvania in 1886, with the same argument. While the case was being considered, and under advisement of Biddle, they paid their 1884 taxes “under protest” so that they could recoup that money if they prevailed in court. They also considered the financial repercussions of a loss; an 1887 budget of roughly of \$11,000 would be reduced to \$1,460 if they had to pay back taxes. In 1889 the Supreme Court of Pennsylvania confirmed the lower court’s finding. William Wagner’s deed of trust indeed enabled the board to expand its holdings with other properties, and the state charter indeed declared the endowment to be tax-free but did not define these expanded holdings as part of the original tax-free endowment. The court argued that if the state legislature in 1864 had intended expanded holdings to be part of what was tax-free, it would have used clear language to indicate such, and in any case the properties in question were not being used for free education. Only the grounds, building, and collections at Seventeenth and Montgomery were tax-free.<sup>45</sup> As early as 1887, the board considered another appeal to the US Supreme Court, but after seeking multiple legal opinions on the matter opted to pay the back taxes and let the matter rest. They paid for it largely by borrowing money from the William Wagner estate, as managed by his widow, Louisa Binney Wagner.<sup>46</sup>

The institute nevertheless needed more sources of income to build their external research program (which was expanding into the Florida Everglades), update the physical plant, complete needed repairs on their properties, and continue to pay faculty. In 1897, feeling that it was “about time to bring the needs of the Institute to the people,” Samuel Wagner formed a committee to explore options to increase the size of their endowment. The board of trustees decided to “appeal to public-spirited citizens for the increase of the endowment of the Institute” by selling subscriptions to be priced on a sliding scale (basically asking for donations).<sup>47</sup> In 1902 they sought an appropriation from the

city of Philadelphia, and in 1904 they proposed an appropriation of \$8,000 from the state of Pennsylvania. Though they did receive small appropriations from time to time, in 1907 they declined to seek further appropriations.

### PEDAGOGY *FOR* THE PUBLIC

Biesta also describes understandings of public pedagogy as a pedagogy “for the public,” in the sense of making access to it more available.<sup>48</sup> This was a commonplace understanding of public pedagogy at the time, inasmuch as free primary education, unmoored from the church and financed by the state, was a significant component of Progressive-Era educational reforms. The university extension movement was also primarily intended to move the privileges of higher education outside the walls of the university and into public space. This is how the Wagner Institute was commonly understood; per a local newspaper called the *Mirror*, “the chief aim of the institute is to give to students who are unable to pay for an academic course the means of acquiring a higher education than that afforded by the public schools.”<sup>49</sup> This notion of pedagogy being *for* the public, understood as *in service to* the public, is perhaps not so straightforward, however. To suggest that a particular form of pedagogy would properly serve the public as a whole would problematically figure the public in the singular, thus, as discussed previously, obscuring the struggle between diverse epistemes that partially constitute the public sphere in the first place. This is also why it is problematic to conceive of public pedagogy as having particular roots in this or that political tradition.<sup>50</sup> If we are to understand the public in terms of the contestation of multiple counter-publics, per Fraser, it makes more sense to look at the tension within and among the trustees and faculty about which methods of pedagogy would serve the public interest, and why.<sup>51</sup> While Wagner officials may have themselves seen the public in the singular, their disagreements in some ways mirror the reality that pedagogies for some publics are not necessarily pedagogies for other publics.

Disagreements among the faculty and trustees about whether the Wagner Institute should give final examinations, grades, and certificates is perhaps the most useful example. In July 1885 the board of trustees decided that Wagner Institute lectures would be divided into two



types: the first, and most common, would be “popular instruction in the practiced and natural sciences by means of lectures in the lecture room free to the public at large without class restriction,” while the second would be “methods, to qualified individuals, wherever possible.”<sup>52</sup> This was based in principle on William Wagner’s original deed of trust, which explicitly stated that priority was to be given to popular instruction, and *if* funds remained they could be devoted to “the establishment and maintenance of a thorough Polytechnic School, the requirement to admission to which shall be left to the discretion of the said Board of trustees.”<sup>53</sup> Understanding their mission first and foremost to be “popular” education, and only specialized, occupation-specific instruction if funds warranted (which in 1885 they did not), the board decided against granting degrees, or even grades for courses completed.<sup>54</sup>

In October 1885 Sidney Skidmore, the secretary of the board of trustees, entered a minority report into the minutes of the board arguing vehemently that the board was not adequately following the founder’s vision of popular education. First, he argued that the hours of the Wagner Institute’s courses should be scheduled around workers’ schedules so they could both work and study. Second, he argued that the deed of trust allowed for the funding of faculty research only if the educational needs of the institute (including free education, a library and reading space, and polytechnic school) were met first. This was in reference to discussions of a research trip to Florida to be led by Wagner Institute trustee Joseph Willcox, which was approved in the amount of \$300 in November 1885.<sup>55</sup> Third, and most importantly, Skidmore felt that providing grades and certificates of completion would serve the public interest *more*, not less, presumably because it would enable the upward mobility of the institute’s students. The other members of the board, however, saw things differently and continued to eschew grades and certificates.<sup>56</sup> In 1888 they declined a request from nearby Temple College (now Temple University) to give students grades so that Temple students might attend the Wagner Institute for transferrable credit.<sup>57</sup>

Debates about formal exams, grades, and certificates turned on the question of what constitutes popular education in the first place—the accessibility of learning and an inquisitive, freely roaming mind, or the servicing of skills and marketable credentials for upward mobility. Debates about trade-offs between vocational and liberal forms of education were pervasive at the time, and remain so today. The board of trustees’



calculations about the functionality of grades and certificates shifted mostly as it aligned its purposes with the university extension movement beginning in 1890. Originating from elite universities (Cambridge, Oxford, and the University of Pennsylvania), university extension advocates embraced the use of grades and certificates; a statement authored by Samuel Wagner, University of Pennsylvania provost William Pepper, and others lauded the movement's work on grounds that "to render a community more generally and highly educated is to increase not only its happiness and its welfare, *but its effective industrial state*."<sup>58</sup> Indeed, access to college and its benefits was one of the chief draws of university extension, and the Wagner Institute received more than a few inquiries related to certifications from the public. For instance, a blacksmith by the name of Stephen Raybold wrote to the Wagner Institute: "I wish to study science and elevate myself, to become a teacher if possible."<sup>59</sup> A more noteworthy example is provided by a letter from one Benjamin DeCasseres:

I am but 17 years of age and circumstances will not permit me to attend a college. I am very anxious to learn and if I am not mistaken this new movement [university extension] is for the benefit of those who are in the same position I am.<sup>60</sup>

This is in fact the same Benjamin DeCasseres who would later become a well-known journalist, poet, and critic of socialism in the early years of the twentieth century. At the time of the letter he was a young employee of the *Philadelphia Press*, and there is no record of whether he actually attended the Wagner Institute.

The board of trustees, as it decided to let the Philadelphia Society for the Extension of University Teaching use its facilities, resolved to give exams and grades in order to harmonize with their practices.<sup>61</sup> This was received differently by different faculty. Paleontologist Edward Cope began giving grades by the end of the spring term of 1891.<sup>62</sup> On the other hand, Cope's colleague, geologist Angelo Heilprin, was so adamantly opposed to the scheme that he refused to lecture at the Wagner Institute over the matter. Heilprin found the new teaching methods "preposterous," stating in his resignation letter that "I cannot lend my name to a scheme of education which should belittle me in the esteem of every true student."<sup>63</sup> The Committee on Instruction (composed of faculty) in 1891 penned a sharply worded letter to the board of trustees decry-

ing the new methods. They argued that the system of exams and grades was anathema to William Wagner's wishes "that the lectures are to have special adaptation to the recreation and instruction of the masses of the people, rather than the formal teaching of a classified and graded school."<sup>64</sup> They argued that since Wagner had deliberately allowed for a polytechnic school if funds allowed, he clearly did not consider the free lectures a school per se, with traditional school techniques (nor did the Wagner Institute have the funds, in the committee's estimation). They continued:

There are scores of schools where [*sic*] graded instruction is given, but there is but one Wagner Free Institute of Science in Philadelphia, whose first, and at present, main mission, in connection with its Library and Museum, is the free education of the masses of the people, of all ages and classes. The change in methods of instruction during the last year was deeply deplored by many of the old friends of this Institution who formerly attended the lectures, and a return to the old system was earnestly requested.<sup>65</sup>

They continued by arguing that graded instruction be allowed for those who want it, but not required for those who do not.

The board of trustees did not return to the old system. Writing to the superintendent of grounds (John Rothermal) in 1895, Samuel Tobias Wagner (engineering professor and nephew of the president of the board of trustees, Samuel Wagner) explained:

When the present Faculty, as now constituted, was formed in 1892 the President outlined a course of graded work in each department in place of disjointed work, and the value of such a policy is beginning to tell when we come into competition with institutions as the Drexel or Temple College.<sup>66</sup>

In addition to competition with Drexel and Temple, the local labor market appeared to influence the provision of certificates of completion; as actuary Thomas L. Montgomery reported, the certificates were "thoroughly appreciated by business concerns requiring mechanical help as an evidence of work accomplished" (hence Samuel Tobias Wagner argued for a standardization of their form).<sup>67</sup> Throughout the 1890s there continued to be lengthy discussions among the faculty on how "the pop-

ular side of the lecture work” would be maintained in the spirit of the founder’s wishes.<sup>68</sup> As late as 1899, for instance, then chairman of the faculty Richard Westbrook (Leidy died in 1891) proposed to the board of trustees a plan to keep a certain segment of their courses free of syllabi and graded exams, such that they remain “thoroughly popular and adapted to the masses of the people who have not had the advantages of a liberal education.”<sup>69</sup> Much of this appears to be concern over sagging attendance at their lectures.<sup>70</sup> The provision of exams, grades, and certificates continued nevertheless.

Differing views on how to best serve the public interest among faculty and trustees were reflected in other debates as well. For instance, the board of trustees debated whether the grounds outside the Wagner Institute should be manicured to be aesthetically pleasing or whether they should be arranged to provide educational value, at greater expense. Samuel Wagner eventually talked other trustees into the latter, and by April 1895 the board of trustees resolved to install a botanical garden and arboretum.<sup>71</sup> Samuel Tobias Wagner (an engineer) debated with actuary Thomas Lynch Montgomery whether English literature classes were in line with the founder’s wishes.<sup>72</sup> What they commonly agreed served the public interest, however, was the use of Wagner Institute space as a branch of the burgeoning free (public) library system of Philadelphia beginning in 1892. As Sydney Skidmore put it:

Since the Wagner Free Institute and the Free Libraries have a common purpose, viz, the furnishing of free educational facilities to the public, and each at present has what the other has not, they should be made to work conjointly and sustain each other in effect until such time as either or both can work with greater efficiency alone.<sup>73</sup>

With the Free Library of Philadelphia wildly popular, and demand exceeding capacity in branches all over the city, the board of trustees agreed in 1901 to build a 2,700 ft<sup>2</sup> extension on the west side of the institute, in order to enlarge the Wagner Institute’s branch of the library.<sup>74</sup> That the Wagner Institute embraced the expansion of the free library system and served as the first branch of the Free Library speaks not only to what Wagner officials saw as serving the public interest but how its activities operated in the construction of publicness. As such, we turn to the idea of publicness next.

### PEDAGOGY IN THE INTEREST OF PUBLICNESS

To recall, Biesta's connection of pedagogy to the political was through an understanding of public pedagogy that serves the interest of "publicness," wherein the realization of the public is always an open and contingent process. "Enacting a concern for publicness," Biesta suggests, "is not about teaching individuals what they should be, nor about demanding from them what they learn, but is about forms of interruption that keep the opportunities for 'becoming public' open."<sup>75</sup> This contrasts with the liberal notion of the public often associated with Dewey, the one in which museum displays of nationhood and empire helped draw a thread through various bracketed publics, thus obscuring the material and class differences underpinning them.<sup>76</sup> What sort of public pedagogy Wagner officials espoused would be a flawed question, as the answer would inevitably be both, in different ways. My objective, rather, is to look at what sorts of activities enacted or constrained publicness.

Along these lines, we might consider how various bracketed publics interacted in the space of the Wagner Institute. The institute was certainly open to attendees of any social class or gender (and race is never mentioned in the institute's documents), but, perhaps unsurprisingly for the era, few women were employed by it. The topic of employing women was openly discussed by Wagner officials; in an 1891 letter to Thomas Lynch Montgomery, Joseph Willcox writes:

I was pleased to receive your letter a few days ago. The question of the employment of a female assistant in the W. Institute I supposed had been disposed of, as it had been referred to the Board of the Museum and the Library, who concluded that it was not desirable to make such an appointment. Efficiency is what we require there—not somebody . . . whose qualification is a willingness to serve for a very moderate salary.<sup>77</sup>

This was for an assistant, not a faculty member. One of the first women to lecture at the Wagner Institute was Dr. Emily Hunt, who applied in April 1895 to teach any of physiology, hygiene, botany, and zoology.<sup>78</sup> The board approved her to give a lecture called *What the Trees Teach Us* on a contingent basis, and at a reduced salary. In May 1896 the board decided to add Hunt to the faculty permanently, at the same salary as men.<sup>79</sup>

Hunt's employment was apparently not without controversy among the faculty. An 1899 entry in the faculty minutes indicates that they "respectfully decline to express an opinion as to the appointment of Dr. Hunt as professor of botany at this institution."<sup>80</sup> A corresponding entry in the minutes of the board of trustees states "that in as much as the faculty have acquiesced in the appointment of Dr. Hunt as professor of botany the said appointment is largely confirmed."<sup>81</sup> The use of the term "acquiesced" implies some dispute on the matter, the precise nature of which is not captured in the records. Other women were employed as lecturers at the Wagner Institute following Hunt, but none with the public profile of the male faculty.

In addition to the important question of gendered inclusions and exclusions in the practices of public pedagogy, the aforementioned debates about grades and certificates intersect with the question of publicness, in that they reflected different assumptions about *why* the poor are poor. William Wagner's original mission was clear—"to improve and elevate the working classes in the city of Philadelphia."<sup>82</sup> Likewise, in 1901 Wagner Institute physics professor George Stradling characterized the value of the institute's public pedagogy as

productive of a great amount of good in lifting one here and there above the level of his intellectual surroundings. A young weaver, who comes to my lectures, is growing steadily by reason of what he gets at the Wagner Institute and the other popular educational places.<sup>83</sup>

As long as social and economic class is understood as a function of "intellectual surroundings," which can be transcended through intellectual stimulation, such formalities as grades and certificates seem less vital. On the other hand, if it is seen as dependent upon the *demonstration* of skills and accomplishments (as Skidmore evidently saw it), then grades and certificates would be imperative. At the crux of debates about liberal and vocational education, then, are imaginations of social mobility. Stradling's statement above is what might be called, in today's terms, a culture of poverty argument, in which poverty is understood as having cultural roots rather than being a function of political economy. The value of public pedagogy as he describes it, as with Dewey, is about producing a certain type of pupil, rather than a statement about the conditions in which he or she accesses education.

This also brings us to the point that science is a particular way of knowing, or episteme, through which the Wagner Institute sought to enact publicness. The dominant, popular understanding of political economy at the time was one predicated on a naturalist epistemology, in which social questions have answers rooted in nature. This is reflected in the Wagner Institute's brief employment of Walter S. Tower, one of the early twentieth-century geographers known for advocating geography as a systematic regional science.<sup>84</sup> Moreover, it explains their embrace of monetary theorist and greenback advocate Arthur Kitson's request to lecture at the Wagner Institute on the topic of monetary policy in 1894. In his initial contact with the institute, Kitson remarked, "As far as I know, the ideas advanced by me are new and original and whilst I do not expect the public will immediately embrace them, I certainly claim for them a scientific basis and do not hesitate to challenge criticism."<sup>85</sup> The board of trustees approved his request for two lectures, based on his recent book *A Scientific Solution to the Money Question*, in April 1895.<sup>86</sup> Kitson prefaces his work by questioning the neglect by classical economists (such as William Stanley Jevons) of a purely scientific approach to economics. He wanted to separate economics from politics, but not necessarily from ethics; in place of politics, he substituted a "science of ethics" deriving from social Darwinist Herbert Spencer.<sup>87</sup> Despite his claim to originality, such a tactic was not at all uncommon in his day, and in fact faith in naturalist epistemology was a driving force behind the disaggregation of political economy into putatively separate categories of politics and economics. Imaginations of the economic as distinct from the political, save perhaps a notion of ethics deriving from Darwinian nature, were typical of arguments that class mobility is a function of intellectual stimulus and initiative.

The Wagner Institute was also involved in other important issues of the day, too many in fact to discuss in any detail here. For example, Samuel Tobias Wagner played a key role as an engineer in efforts to improve the Philadelphia water system at the time, for the purpose of public health.<sup>88</sup> The institute also agreed to direct original research into the emerging issue of food preservatives, and in 1904 agreed to sponsor a guest lecturer from the Pennsylvania Society for the Prevention of Tuberculosis. In 1907, given the rapid proliferation of electrification, they moved to add electrical engineering to what had been approved in the

deed of trust as “civil and mining engineering” (concluding that electrical engineering would have been in line with the founder’s wishes, but for the fact that William Wagner could not have known how prevalent electricity would become). The institute also devoted considerable efforts to the creation of a marine zoology lab to be located in Florida, though the lab itself never materialized. By about 1910, the Wagner Institute began to embrace the emergent Progressive-Era conservation movement as well. Entries in the minutes of the board of trustees indicate that throughout these developments, Wagner officials maintained due vigilance on whether the institute was accessible to, and serving the interests of, the public.<sup>89</sup>

### CONCLUSION

In 1913 Temple College proposed a merger with the Wagner Institute. The board of trustees appears to have genuinely considered the possibility, but such a merger never occurred (likely as it would have conflicted with the legal requirements of the deed of trust and state charter).<sup>90</sup> While the period between 1885 and World War I represented the high point of the Wagner Institute’s activity and global reach, it maintained regular free science courses throughout its history and continues to do so today (save for the interruption of the COVID-19 pandemic). As the nature of publicness changes (as it must), the nature of public pedagogy—as indeed a historically contingent epistemology—must change with it. Hence, to understand public pedagogy is to understand it in its historically and geographically specific manifestations. This paper has explored how public pedagogy was enacted by the Wagner Free Institute of Science in Progressive-Era Philadelphia. In doing so it considered how the Wagner Institute can be understood as both *of* and *for* the public, but more importantly how its activities can be understood as part of the constant reconstitution of publicness. The relationship between pedagogy and publicness is vital to understand inasmuch as the processes of teaching and learning are integral to social and political life. That is, if the constitution of public space is constantly mediated through everyday practice, pedagogy in all its various forms, whether institutional or informal, needs to be understood as part of that mediation.

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## NOTES

1. Eugene Bolt and Susan Glassman, National Historical Landmark Registration Form, Philadelphia, 1990, section 8, 2.
2. William Wagner, Deed of Trust of William Wagner and Wife, Philadelphia, 1864, 9.
3. This according to Lynn Staeheli and Don Mitchell, "Locating the Public in Research and Practice," *Progress in Human Geography* 31, no. 6 (2007): 792–811.
4. Glenn Savage, "Problematizing 'Public Pedagogy' in Educational Research," in *Handbook of Public Pedagogy: Education and Learning beyond Schooling*, ed. Jennifer Sandlin, Brian Schultz, and Jake Burdick (New York: Routledge, 2010), 103–15.
5. David Livingstone and Charles Withers, eds., *Geographies of Nineteenth-Century Science* (Chicago: University of Chicago Press, 2011).
6. The Wagner Free Institute of Science: A Brief History, Wagner Free Institute (website), [http://wagnerfreeinstitute.org/documents/HistoryHandout\\_000.pdf](http://wagnerfreeinstitute.org/documents/HistoryHandout_000.pdf).
7. Save for perhaps Gert Biesta, "Becoming Public: Public Pedagogy, Citizenship and the Public Sphere," *Social and Cultural Geography* 13, no. 7 (2012): 683–97, and Noel Castree, Duncan Fuller, Andrew Kent, Aubrey Kobayashi, Christopher Merrett, Laura Pulido, and Laura Barraclough, "Geography, Pedagogy and Politics," *Progress in Human Geography* 32, no. 5 (2008): 680–718.
8. Jennifer Sandlin, Michael O'Malley, and Jake Burdick, "Mapping the Complexity of Public Pedagogy Scholarship: 1894–2010," *Review in Educational Research* 81, no. 3 (2011): 338–75.
9. John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (New York: Macmillan, 1916).
10. For example, see Henry Giroux, *The Mouse That Roared: Disney and the End of Innocence* (Lanham, MD: Rowman & Littlefield, 2010).
11. Noel Castree, "Geography's New Public Intellectuals?" *Antipode* 38, no. 2 (2006): 396–412.
12. Biesta, "Becoming Public"; Hannah Arendt, *The Human Condition*, 2nd ed. (Chicago: University of Chicago Press, 1998).
13. Don Mitchell, "The End of Public Space? People's Park, Definitions of the Public, and Democracy," *Annals of the Association of American Geographers* 85, no.



1 (1995): 108–33. See also Don Mitchell, *The Right to the City: Social Justice and the Fight for Public Space* (New York: Guilford Press, 2003).

14. Mona Domosh, “Those ‘Gorgeous Incongruities’: Polite Politics and Public Space on the Streets of Nineteenth-Century New York City,” *Annals of the Association of American Geographers* 88, no. 2 (1998): 209–26.

15. Elizabeth Ellsworth, *Places of Learning: Media, Architecture, Pedagogy* (New York: Routledge, 2005); Jennifer Sandlin, Brian Schultz, and Jake Burdick, “Understanding, Mapping, and Exploring the Terrain of Public Pedagogy,” in Sandlin et al., *Handbook of Public Pedagogy*, 1–6.

16. Cédric Terzi and Stéphane Tonnelat, “The Publicization of Public Space,” *Environment and Planning A* 49, no. 3 (2017): 519–36.

17. John Dewey, *The School and Society* (Chicago: University of Chicago Press, 1900), 7.

18. Dewey, *Democracy and Education*, 6.

19. Jurgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* (Boston: MIT Press, 1991); Thorstein Veblen, *The Theory of the Leisure Class* (New York: Macmillan, 1899).

20. Carl Cassegård, “Contestation and Bracketing: The Relation between Public Space and the Public Sphere,” *Environment and Planning D: Society and Space* 32, no. 4 (2014): 689–703.

21. Mary Ann Tetrault, “Formal Politics, Meta-Space, and the Construction of Civil Life,” in *Philosophy and Geography II: The Production of Public Space*, ed. Andrew Light and Jonathan Smith (New York: Rowman & Littlefield, 1998), 81–97.

22. Savage, “Problematising ‘Public Pedagogy.’”

23. Sally G. Kohlsted, “Place and Museum Space: The Smithsonian Institution, National Identity, and the American West, 1846–1896,” in *Geographies of Nineteenth Century Science*, ed. David Livingstone and Charles Withers (Chicago: University of Chicago Press, 2011), 399–438.

24. Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (New York: Verso, 1983).

25. Quoted in Sally G. Kohlsted, “‘Thoughts in Things’: Modernity, History, and North American Museums,” *Isis* 96, no. 4 (2005): 588.

26. Kohlsted, “Thoughts in Things.” The Wagner Institute was private, rather than a state entity (save for its Pennsylvania charter and partially tax-exempt status), but it had regular communication with the Smithsonian Institution, including George Brown Goode himself.

27. Nancy Fraser, “Rethinking the Public Sphere: A Contribution to Actually Existing Democracy,” *Social Text* 25/26 (1990): 56–79.

28. Carolyn Adams, David Bartelt, David Elesh, Ira Goldstein, Nancy Kleniewski, and William Yancey, *Philadelphia: Neighborhoods, Division, and Conflict in a Postindustrial City* (Philadelphia: Temple University Press, 1991).

29. Susan Davis, *Parades and Power: Street Theatre in Nineteenth-Century Philadelphia* (Oakland: University of California Press, 1986).
30. Samuel B. Warner, *The Private City: Philadelphia in Three Periods of Its Growth*, 2nd ed. (Philadelphia: University of Pennsylvania Press, 1987), xi–xii.
31. Staeheli and Mitchell, “Locating the Public,” 795.
32. Warner, *Private City*.
33. William Reese, *Power and the Promise of School Reform: Grassroots Movements during the Progressive Era* (New York: Teachers College Press, 2002).
34. Biesta, “Becoming Public.”
35. Robert Hamilton and Robert Turner, “Hegel in Glasgow: Idealists and the Emergence of Adult Education in the West of Scotland, 1866–1927,” *Studies in the Education of Adults* 38, no. 2 (2006): 195–209; Federico Ferretti, “Radicalizing Pedagogy: Geography and Libertarian Pedagogy between the Nineteenth and Twentieth centuries,” in *The Radicalization of Pedagogy: Anarchism, Geography, and the Spirit of Revolt*, ed. Simon Springer, Marcelo Lopes de Souza, and Richard White (New York: Rowman & Littlefield, 2016), 51–72.
36. George F. James, ed., *Handbook of University Extension*, 2nd ed. (Philadelphia, 1893). It also worked directly with the already existing agricultural extension system in the United States, but that version of extension had longer roots stretching back to the Morrill Land Grant College Acts of 1862 and 1890. See Wayne Rasmussen, *Taking the University to the People: Seventy-Five Years of Cooperative Extension* (Ames: Iowa State University Press, 1989).
37. Edmund James, “Introduction. Some General Considerations Concerning University Extension,” in George F. James, *Handbook of University Extension*, viii.
38. George F. James, “History of a Branch Society,” in George F. James, *Handbook of University Extension*, 16–20.
39. Transcript of Samuel Wagner speech, n.d., accession 91-020, folder 10, archives of the Wagner Free Institute of Science, Philadelphia (hereafter Wagner archives).
40. Biesta, “Becoming Public.”
41. R. Frothingham to S. Wagner, 1896, accession 91-025, folder 15, Wagner archives.
42. Minutes of the Board of Trustees, n.d., accession 89-030, Wagner archives.
43. Wagner Free Institute of Science vs. City of Philadelphia, complainants’ paper book, 1885, accession 90-010, box 1, folder 11, Wagner archives.
44. Minutes of the Board of Trustees, 18.
45. Wagner Free Institute of Science, appellant, vs. City of Philadelphia, et al., appellees, paper book of appellees, 1889, accession 90-010, box 1, folder 12, Wagner archives.
46. Minutes of the Board of Trustees.
47. An Appeal, n.d., accession 89-040, Wagner archives, 3.
48. Biesta, “Becoming Public.”

49. *Mirror*, 1895, Wagner Institute: A School for the Free Instruction in the Higher Educational Branches, accession 89-040, Wagner archives.

50. As does Ferretti, "Radicalizing Pedagogy."

51. Fraser, "Rethinking the Public Sphere."

52. Minutes of the Board of Trustees, 37.

53. Deed of Trust, 9.

54. Though they could name successful students "fellows" of the institute, which they did on at least one occasion—a student by the name of Edgar Wherry.

55. The trip occurred in 1886 and unearthed the first remains of a saber-toothed tiger found in the United States.

56. Though it was at this time, per Skidmore's request, that they included a reading room and library on the first floor of the institute.

57. Minutes of the Board of Trustees.

58. S. Wagner, H. Jayne, F. Mills, C. Thomas, W. Thompson, and W. Pepper, n.d., Society for the Extension of University Teaching: University Extension Association, accession 91-025, folder 7, Wagner archives. Emphasis added. In the context of the statement, this refers to why local communities might want to contribute to their local chapters—both for intellectual uplifting and for the economic benefits.

59. S. Raybold to the Wagner Institute, 1891, accession 91-020, folder 8, Wagner archives.

60. B. DeCasseres to the Wagner Institute, 1890, accession 91-020, folder 6, Wagner archives.

61. Minutes of the Board of Trustees.

62. G. Henderson to T. L. Montgomery, 1891, accession 91-025, folder 9, Wagner archives.

63. A. Heilprin to Richard Westbrook, 1890, accession 91-025, folder 8, Wagner archives. The operative term here might well be "true" student, as in those who pursue a love of knowledge, rather than external rewards like grades.

64. Committee on Instruction to Board of Trustees, 1891, accession 91-025, folder 9, Wagner archives. Underlining in original.

65. Committee on Instruction to Board of Trustees. Emphasis in original.

66. S. T. Wagner to J. Rothermal, 1895, accession 91-045, folder 8, Wagner archives. This letter was in reference to preparing the grounds for a public graduation ceremony at the end of the spring semester.

67. Thomas Lynch Montgomery, Actuary's Report, 1895, accession 91-025, folder 35, Wagner archives.

68. Minutes of the Faculty, accession 89-035, Wagner archives, 18.

69. R. Westbrook to Board of Trustees, 1899, accession 91-025, folder 27, Wagner archives.

70. Indeed, Thomas Lynch Montgomery (the actuary) reported an attendance of 5,983 students across fifty-six lectures in the fall semester of 1899, and that this was well fewer than normal. While Montgomery states no reason for this, it is

noteworthy that there were significant outbreaks of cholera and typhoid fever in Philadelphia in 1899. T. L. Montgomery, Actuary's Report, 1899, accession 91-025, folder 32, Wagner archives.

71. Minutes of the Board of Trustees.

72. S. T. Wagner to T. L. Montgomery, 1900, accession 90-010, box 4, folder 16, Wagner archives.

73. Skidmore in the Minutes of the Board of Trustees, 1892, 266.

74. Minutes of the Board of Trustees. They paid for the construction of the west wing via another loan from the William Wagner estate.

75. Biesta, "Becoming Public," 685.

76. Indeed, in a letter to Montgomery, George Henderson of University Extension referred to Sir Halford Mackinder, whose work is frequently associated with the British imperialism of the era, as "the next shining light that we shall bring over to this country." G. Henderson to T. L. Montgomery, 1892, accession 91-020, folder 4, Wagner archives.

77. J. Willcox to T. L. Montgomery, 1891, accession 91-040, box 3, folder 3, Wagner archives. The portion replaced by ellipses reads "who is willing to serve for a" but is crossed out.

78. E. Hunt to the Wagner Institute, 1895, accession 91-025, folder 13, Wagner archives.

79. Minutes of the Board of Trustees.

80. Minutes of the Faculty, 29.

81. Minutes of the Board of Trustees, 392.

82. Deed of Trust, 9.

83. G. Stradling to T. L. Montgomery, 1901, accession 90-010, box 4, folder 17, Wagner archives.

84. Geoffrey Martin, *American Geography and Geographers: Toward Geographical Science* (Oxford: Oxford University Press, 2015). Tower lectured at the Wagner Institute on the physical geography of eastern Pennsylvania.

85. A. Kitson to T. L. Montgomery, 1894, accession 91-025, folder 11, Wagner archives.

86. Minutes of the Board of Trustees.

87. Arthur Kitson, *A Scientific Solution to the Money Question* (Boston: Arena Press, 1894), xiii.

88. He in fact considered leaving the institute altogether because of his work on engineering a new water system. S. T. Wagner to T. L. Montgomery, accession 91-040, box 4, folder 68, Wagner archives.

89. Minutes of the Board of Trustees.

90. Minutes of the Board of Trustees.