A Brief History of the Mobile Museum: What it is, what it was, and what it can be

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I. Introduction

America has been called a "nation on the move," and rightly so: the vast distances of the country are knitted together by over 4 million miles of roads, paved and unpaved. If an institution or service can possibly be fit with wheels and moved from place to place, it will be. From blood donation centers, to restaurants, to libraries, to museums, people have successfully adapted their cause or institution to a traveling vehicle. Early in their history, museums sprang upon this idea as an outreach method that would help to expand their audience beyond the walls of the museum building. From wagons, to trucks, to specially-designed Featherlite "education trailers," technology has accommodated this desire. Though museum practice and theory has changed from the early 20th century to the early 21st century, the "museum on wheels" has remained a popular outreach choice. My own involvement with a mobile outreach project, the KU Mobile Collaboratory, has inspired my research into this subject.

The KU Mobile Collaboratory (stylized as the MoCOLAB) is a mobile space conceptualized as "KU's community classroom on wheels." In January 2012, professors Nils Gore and Shannon Criss were inspired by a call for a space that could be moved as needed to aid in conducting community research. It was conceived out of the realization that many faculty, staff, and students at the University of Kansas conduct research and projects that are firmly embedded in the community. Much of this research relies on close cooperation and input from the community. In 2013, a 1972 31-foot Airstream Land Yacht was purchased with funding through a university Strategic Initiative Level II grant, then redesigned and constructed as a part of an architectural design studio class. Ideally, the MoCOLAB space can be utilized

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¹ U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2014, table HM-12*, (Washington, DC: Annual issues), Washington D.C.: U.S. Department of Transportation, 2015. http://www.fhwa.dot.gov/policyinformation/statistics.cfm.

² See Appendix A.

in a variety of ways and has been designed with a "high degree of flexibility" and accessibility in its efforts to work with and engage the community on and off the KU campus.³

The KU Libraries Exhibits Program began in 2009, producing exhibitions as a means to highlight library collections as they complement and reinforce campus research and scholarship. This involves collaboration between the different libraries on campus and other cultural venues at KU, in the local community, and in the region at large. The exhibitions promote and reflect the "scholarly and educational mission of the University, reflect the Libraries' commitment to freedom of information and cultural diversity, and stimulate academic discourse on campus." By March 2015 the program had produced 16 exhibits, presenting subjects relating to the work of KU professors past and present and to the history of scholarship at the university. These exhibits featured library materials such as books, theses, journal articles, reproductions of digital collections (i.e. pictures, government documents, video, etc.), and occasionally artifacts. Audiences have largely been limited to students, staff, faculty, and visitors to the campus. As the University works towards a more collaborative way of operating, so too do the KU Libraries and the KU Libraries Exhibits Program.

As the designers of the MoCOLAB began the process of planning the project, they looked to potential stakeholders in all parts of the University. At the same time, the KU Libraries had been searching for ways in which they could better serve the community outside of the University, breaking down the perceived barriers between the research libraries on campus and the public. Sarah Goodwin Thiel, director of the KU Libraries Exhibits Program, recognized that a collaboration between the

³ "KU's MoCOLAB Rolls out for Campus Debut April 10th," *KU Architecture Department,* April 6, 2015, accessed March 9, 2016. https://architecture.ku.edu/cherry-picked-ku%E2%80%99s-mocolab-rolls-out-campus-debut-april-10th.

[&]quot;About the KU MoCOLAB," *KU Mobile Collaboratory (MoCOLAB)*, April 21, 2015, accessed March 9, 2016. http://kumocolab.org/about-the-mobile-collaboratory/.

⁴ "History of the Haricombe Gallery," *KU Libraries*, April 22, 2015, accessed March 9, 2016, https://lib.ku.edu/exhibits/gallery-spaces/haricombe.

⁵ "KU Libraries Exhibits Program," KU Libraries, March 8, 2016, accessed March 9, 2016, http://lib.ku.edu/exhibits.

Mocolab and the Exhibits Program represented an exciting way to take library exhibitions from the top of the hill out into the community. This led to the creation of the Traveling University Libraries Exhibit (TULE) program. With the inauguration of the Mocolab in April 2014, discussions began in the summer and fall of 2014 about the best ways in which exhibits could be adapted to the Mocolab, and identifying potential partners and events that might play host to the collaboration. In October 2015, the first TULE exhibit debuted. In the process leading up to this, the collaborative effort raised several questions about mobile museums and mobile exhibitions from museums: When and why did they come to exist? What are their goals? Who is the audience? Are they sustainable in the contemporary museum industry? This project delves into the history and evolution of the mobile exhibit, examines the changes in their design and goals through the years, establishes a typology of the different forms, situates the Mocolab within this typology, and suggests best practices to ensure sustainability and effectiveness of mobile exhibits as education tools in the present and future museum industry.

Note on Terminology

At the start of my research, I quickly discovered that search terms such as "mobile museum," "mobile exhibit," and "traveling exhibit" did not consistently bring up results relevant to the project.

Much of the time, I was met with the robust web presence of the Mobile Museum of Art in Alabama, various museums featuring mobile homes, "traveling trunk"-style programs, and advertising about exhibits available to travel to museums across the country. There is no standard terminology.

For the purposes of this project, I am interested primarily in programs and exhibits that offer some form of curated and/or educational programming that is installed in and primarily experienced in a mobile setting. This programming may be independent or associated with a larger institution. That is, they may travel with programming materials stowed to minimize movement during transit, but will be set up in the traveling vehicle itself. This excludes exhibits—permanent or temporary—that travel in a

truck or trailer and must be removed and set up in a second location—for example, any of the American Museum of Natural History's traveling exhibitions such as "Dragons, Unicorns, & Mermaids: Mythic Creatures." To refer to the concept of a traveling museum space, I will primarily use the term "mobile exhibit" or "mobile exhibit space" to refer to exhibits circulated by larger institutions, and "mobile museum" to refer to independent programs that do not produce traditional gallery exhibits. I use the term "traveling museum" to refer to the earliest examples of the concept. The terms "mobile" and "traveling" are intended to be synonymous.

Methods

Because of the lack of writing on mobile museums and exhibits, I have relied on various sources to find appropriate examples. Early in the history of mobile museums, many were written about and published in dedicated pamphlets and featured in education journals. Later, they began to appear in museum journals and were covered by newspapers. By the beginning of the digital age, they appeared on museum websites and featured their own websites or blogs. All of these sources reliably provide the beginning date for each example, but do not publicize the end dates. With the understanding that few organizations (museums included) are eager to publicize the failure of a program, I have had to dig into institutional newsletters, government documents, various historical societies' archives, as well as newspapers and journals. In most cases I have been able to find concrete end dates. In cases where this proved impossible, I have given my best educated guess as to the closing date.

From these sources, I have compiled a list of 38 examples spanning 1902 to the present day.

This list does not include all examples I have come across during my research. I have come across even more examples since finalizing the list attached in Appendix A, but have not included because they represent duplications of the mobile museums included. The examples represented in each period of my history of the mobile museum were chosen for two reasons: each characterizes the period in which they

were produced, and are the most fully-documented exhibits. My method for constructing the typology has been to gather information about the mission and simplified function of each exhibit. By including data about start date, end date, organizational structure (i.e. independent foundation vs. museum project), funding source, intended audience, and basic programming, I have drawn conclusions about the best practices for each type of mobile exhibit. This will be explored in more detail in this paper.

II. Development of the Mobile Museum

Precursors

The desire to take educational materials out of brick-and-mortar institutions and make them available to underserved communities did not start in museums, but rather in libraries. The first traveling, or "perambulating," libraries arose in England, stemming from the larger Victorian movement to educate, and thereby improve, the general public. With the passage of the Public Libraries Act of 1850, many public libraries were established in Great Britain. These early libraries were quickly supplemented by the mobile library. The two earliest of these "perambulating libraries" were founded in Cumbria in 1857 and Cheshire in 1859. Both travelled to rural villages to provide access to a carefully chosen selection of literature. Both of these mobile libraries took the form of carts: in Cumbria, it was pushed by hand, while in Cheshire it was horse-drawn. In both cases the carts traveled on a predetermined route, were sponsored by local business leaders or unions, administered by a board consisting of local officials and prominent citizens, and patronized by paying members. This model of library proved successful, with 12,000 books borrowed in the first year in Cheshire. To this day, a majority of counties in the UK still operate mobile library services.

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⁶ "Issue Brief: Public Libraries," *Politics.co.uk,* October 16, 2012, accessed March 17, 2016, http://www.politics.co.uk/reference/public-libraries.

⁷ "Article from 'The British Workman' February 1st 1857," *George Moore Connection*, Mealsgate.org.uk, accessed March 11, 2016, http://www.mealsgate.org.uk/perambulating-library.php.

This spirit of Victorian reformism in Great Britain that led to the Public Libraries Act of 1850 was also responsible for the less controversial Museum Act of 1845, which gave municipalities the power to establish local museums.8 The effects of these two pieces of legislation did not go unnoticed by American educators and librarians in the Progressive Era, which saw the construction of hundreds of public libraries across the country. Most notably, between 1886 and 1917 the Carnegie Corporation constructed more than 1,600 libraries across the United States, and approximately 900 more internationally. These libraries reflected what contemporaries called the "modern library idea," or the idea that activities of libraries should be centered on public service. Specifically, this included "public support, open shelves, work with children, cooperation with schools, branch libraries, traveling libraries and library advertising." ¹⁰ The expansion of public libraries into smaller cities and towns reflected an interest in reading and education, but was still inadequate for providing materials to people in rural areas. By 1900, Wisconsin had instituted traveling libraries consisting of pre-packed cases of books sent to underserved communities and overseen by local volunteers. Into the 1930s, similar models of distribution existed in Monterey County, California, Wyoming, and Kentucky. 11 Traveling libraries also serviced underserved communities in urban areas. In 1910 the New York Public Library circulated over one million books at 802 traveling library stations targeted towards immigrants and working-class families. 12 The first example of a bookmobile—a staffed traveling library—in the United States was founded in 1904 by Mary Titcomb, a librarian for the Washington County Free Library in Hagerstown,

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George Ian James Orton, An Illustrated History of Mobile Library Services in the United Kingdom: With Notes on Travelling Libraries and Early Public Library Transport (Sudbury, UK: Branch and Mobile Libraries Group, 1980).

⁸ Thomas Kelly, *Books for the people: an illustrated history of the British public library* (London: André Deutsch, 1977), 77.

⁹ Christine Pawley, "Blood and Thunder on the Bookmobile," in *Institutions of Reading*, ed. Thomas Augst and Kenneth E. Carpenter (Amherst, MA: University of Massachusetts Press, 2007), 269.

¹⁰ Abigail van Slyck quoted by Janice Radway, "The Library As Place, Collection, or Service," in *Institutions of Reading*, ed. Thomas Augst and Kenneth E. Carpenter (Amherst, MA: University of Massachusetts Press, 2007), 247.

¹¹ Pawley, "Blood and Thunder on the Bookmobile," 266-268.

¹² Thomas Augst, "Faith in Reading," in *Institutions of Reading*, ed. Thomas Augst and Kenneth E. Carpenter (Amherst, MA: University of Massachusetts Press, 2007), 166.

Maryland. Titcomb placed library materials into a wagon, which were then transported, lent, and exchanged by the library's janitor. By 1905 the program was a success, and what was initially a rented wagon was purchased and specially converted for book transportation.¹³

American educators and administrators at the highest levels also took note of how this legislation allowed for the expansion of public education in Great Britain, and began to experiment with similar programs in the United States. The *Report of the Commissioner of Education* compiled for the 1899-1900 school year describes the development of educational extension programs operated by universities in the United States. It notes the programs' origins in the British university system, their initial adoption by librarians in New York State in 1887, then their adoption by the State University of New York (SUNY). The report examines the two most successful efforts in addition to the SUNY program: one by the American Society for the Extension of University Teaching in Philadelphia, and one by the University of Chicago. Though both of these cities are highlighted as a center of higher education in the United States at the turn of the 20th century, I will focus on Chicago.

Chicago was particularly successful in the implementation of educational extensions. By 1900, it had become a hub for progressive education equal to New York City thanks to the University of Chicago. Opened in 1892, the University benefited from the philanthropy of John D. Rockefeller and the vision of its first president, William Rainey Harper. The combination of plentiful funding and the influence of Harper, who was able to attract qualified faculty to the city, created the perfect environment for experimentation with education. One notable faculty member was Edward J. James, the founder of the Academy of Political and Social Science and head of the educational extension efforts of the university. These programs included the creation of traveling libraries, lecture study courses, correspondence

¹³ Pawley, "Blood and Thunder on the Bookmobile," 266-268.

¹⁴ United States Office of Education, *Report of the Commissioner of Education for the Year 1899-1900,* Vol. 1 (Washington, D.C.: Government Printing Office, 1901), 303.

¹⁵ US Office of Education, Report of the Commissioner, 307-308.

courses, study clubs, and evening and Saturday classes throughout the metropolitan area. Collaborating with the Chicago School Board and libraries throughout the city, the university extension program was successful in educating the public. Librarians in contact with the extension programs took notice of the "beneficial influence" on the public they served. Another focus of the university was creating a body of well-educated teachers for public schools, raising the quality of public education in the city. For instance, this resulted in changing the name of the "Cook County Normal School" to the "Chicago Normal School," a "still more honorable position" amongst the schools of Chicago. This particular point proved to be crucial to the creation of the first traveling museums. ¹⁶ Educators saw great potential for educational extension, especially "in connection with live colleges and state universities, people's institutes, public libraries, public schools, traveling libraries, traveling museums, and traveling pictures." The Report of the Commissioner directly cites the "earlier Scotch and English traveling libraries" as an influence, and goes on to suggest that larger museums, such as the Smithsonian Institute "distribut[e] to local institutions of science and learning its surplus geological and ethnological specimens"—specifically, to school museums. ¹⁷ It is in this environment of cutting-edge Progressive education that the first traveling museums were created.

Earliest Examples

The educational atmosphere of Chicago was the perfect setting, while the Columbian Exposition of 1893 proved to be the perfect catalyst. World fairs were especially influential to the development of many American museums; this holds especially true for Chicago. While in the planning stages, the organizers of the exposition came to an agreement with the Art Institute of Chicago to provide a lake

¹⁶ Herbert B. Adams, "Summer Schools and University Extension," in *Education in the United States: A Series of Monographs Prepared for the United States Exhibit at the Paris Exposition*, ed. by Nicholas Murray Butler, 821-64, Vol. 2 (Albany, NY: J.B. Lyon Company, 1900), 851-855.

¹⁷ US Office of Education, *Report of the Commissioner*, 310.

front building site in exchange for taking part. ¹⁸ By the end of its run, the exposition had flooded Chicago with natural history specimens, ethnographic artifacts, and other materials that the residents of Chicago found exotic. ¹⁹ This prompted Frederick Ward Putnam to advocate for the foundation of a museum to keep the materials of the exhibition available to the public. He convinced several philanthropists, including Marshall Field and Edward Ayer, to put forward the funds to establish the Columbian Museum of Chicago in the last remaining building of the exposition, which would eventually be known as the Field Museum of Natural History. ²⁰ Outside of Chicago, museums were designed to mimic the fairs. The Beaux Arts architecture featured in the fair was copied in museums across the country, as exemplified by the Commercial Museum in Philadelphia. ²¹ Chicago continued to build neo-classical style museums echoing the Columbian exposition into the 1920s, combining world's fair or exposition materials, park locations, and neo-classical architecture into museum institutions. ²² After the Field Museum was relocated into a new building in 1921, the building once again became home to a museum: the Museum of Science and Industry. ²³

The Chicago Principals' Association of the Chicago public school system realized that many teachers in their schools had obtained "museum material" from the exhibition that proved useful as pedagogical tools. Eventually it became clear that further interpretation was needed if these objects were to be used to their full potential. Spearheaded by Richard Waterman, the Chicago Principals'

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¹⁸ Marjorie Schwarzer, *Riches, Rivals & Radicals: 100 Years of Museums in America* (Washington, D.C.: American Alliance of Museums, 2012), 33.

¹⁹ Richard Waterman, "Use of Traveling Museums in the Public Schools of Chicago," *Elementary School Teacher* 4, no. 10 (1904), 711.

²⁰ Steven Conn, *Museums and American Intellectual Life, 1876-1926* (Chicago: University of Chicago Press, 1998), 30, 78.

²¹ Conn, Museums and American Intellectual Life, 138, 235.

²² Schwarzer, 100 Years of Museums, 33-34.

²³ Ibid., 35.

Association began to gather up materials for a museum to supplement the curriculum of Chicago's public schools in May 1901. The Association believed that

[U]nder competent direction, a moderate expenditure of time and money would result in developing a valuable series of small museum collections illustrating definite topics in the course of study; and that these collections could be circulated among the schools according to a prearranged schedule that would keep each museum in constant use throughout the school year.²⁴

Under the direction of volunteers from the Chicago Principal's Association, the Chicago Bureau of Geography was created, consisting of members from 40 public schools. The program was mainly focused on aiding in the instruction of geography and "nature-study," as well as other subjects. It was funded by member schools and private donors, and headquartered at the Chicago Academy of Sciences.

Materials were gathered from corporate donors, as well as from individual collectors and teachers. These were grouped into "monographic" collections, each supporting the instruction of a particular subject. Specimens were placed in corked bottles, pictures mounted on cards, other supplemental materials housed in scrapbooks, and boxed for transport. All items in each box were assigned accession numbers, which were included in a typed catalog with each exhibit box. Success depended upon the ability to promptly deliver requested materials—a challenge before the introduction of automobiles.

The traveling museums proved to be a success by the standards of their creators. In the first year of operations (1902-1903) 11,000 individual specimens and artifacts were sent to 60 member schools, with many applicants being turned away. Before the end of the first year, the program had

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²⁴ Waterman, "Use of Traveling Museums in the Public Schools of Chicago," 711.

planned to include at least 15,000 artifacts and specimens for the 1903-1904 school year. The successes of the first year prompted the Chicago Principal's Association to hand over administration of the program to the Chicago Normal School—the same school that benefited so enormously from educational extension. ²⁵ By 1908, a static museum housed in the Chicago Normal School had been founded to accommodate class tours, and the space dedicated to the storage, preparation, repair, and shipping of the traveling museums was deemed inadequate for the growth of the program. ²⁶ In 1909, the traveling museums were still overseen by the Geography department of the Chicago Teacher's College (formerly the Chicago Normal School) and volunteers from the Chicago Principal's Association. ²⁷

Despite the Chicago public school traveling museum program's apparent success in 1908 and 1909, there is no mention of it in academic or journalistic sources after 1912. There is no explicit discussion of the traveling museum program's end, but I suspect it has to do with leadership changes at the Chicago Normal School and a history of funding and administrative issues related to an unsupportive Board of Education. Between the school's foundation in 1867 and the ostensible end of the museum program in 1912-1913, it had faced repeated funding challenges and lack of support for the educational experimentation from several school presidents. Responsibility was passed from Cook County to the Chicago Public School board, resulting in the school being renamed three times: Cook County Normal School, Chicago Normal School, Chicago Teacher's College, and Chicago Normal College. This last change occurred in 1913, accompanied by raised admissions standards and a shift of emphasis from

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²⁵ Waterman, "Use of Traveling Museums in the Public Schools of Chicago," 711-712.

²⁶ Chicago Department of Education, *Annual Report of the Superintendent of Schools*, by the Board of Education of the City of Chicago (Chicago: Board of Education of the City of Chicago, 1908), 227-228.

²⁷ George Alfred Brown, "Materials of Teaching," *School and Home Education* 28, no. 5 (January 1909): 180-181.

²⁸ Final mention by W.M. Gregory, "Educational Museum of the Cleveland Schools," in *Journal of Education* 76, no. 16 (October 24, 1912), 431.

²⁹ Chicago Teacher's College, *Emblem 1913 Yearbook* (Chicago: Graduating Class of 1913), Chicago State University Library, Chicago State University, 7. https://archive.org/details/emblem_1913chic.

pedagogy to traditional academics.³⁰ Even at the height of the program in 1909, some educators expressed doubts, arguing that "[i]ts value in the elementary school as a means of training the mind is yet to be determined."³¹ With the city growing rapidly and demographics changing dramatically in Chicago between 1900 and 1910,³² the public school district no longer seemed willing to support such experimentation.

Regardless of the exact reasons, this combination of factors spelled the end of the traveling museum of the Chicago Normal School. However, it did not pass unnoticed. Other large cities, including New York, Cleveland, Philadelphia, and St. Louis, had founded school museums and were interested in the Chicago Public School Traveling Museum. ³³ In 1905, Frederick J.V. Skiff—director of the Field Columbian Museum—commended Waterman's initiative, saying that he [Skiff] "would probably have made provisions [to pursue museum advocacy through public schools] had [he] not been occupied with other important duties [including founding the museum] during the past five years." ³⁴ His comments would foretell, if not directly influence, the activities of the Field Museum less than a decade later.

The Traveling Museum developed by the Field Museum picked up where the Chicago Normal School and Chicago Public Schools left off. Director Skiff, along with the trustees of the museum, were disturbed to learn that only 10% of Chicago school children were able to visit the museum each year. As mentioned above, Skiff was interested in a traveling museum program as early as 1905. This plan went unrealized until 1911, when Norman Wait Harris gifted the museum with \$250,000, later

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³⁰ Edmund W. Kearney and E. Maynard Moore, *A History: Chicago State University, 1867–1979* (Chicago: Chicago State University Foundation, 1979), 30-38.

³¹ Brown, "Materials of Teaching," 181.

³² John F. McDonald, *Chicago: An Economic History* (New York: Routledge, 2015), 71-75.

³³ Gregory, "Educational Museum of the Cleveland Schools," 431.

³⁴ Frederick J.V. Skiff, "The Uses of Educational Museums," *Journal of Education* 62, no. 5 (July 20, 1905), 145.

³⁵ "Traveling Museum Chicago's Plan to Interest the Pupils," Christian Science Monitor, June 3, 1914.

supplemented by an additional \$25,000.³⁶ With this sum, the museum was able to construct custom cases, case stands, exhibits, and transport vehicles. Miniature models of wall cases and exhibits on subjects such as anthropology, zoology, botany, biology, geology, geography, economics, and commerce were sent to schools, libraries, and other locations throughout the city—one of which was the Chicago Normal College (formerly the Chicago Normal School)—free of charge.³⁷

With the formation of the N.W. Harris Public School Extension, the Field Museum's traveling museum program was able to collaborate successfully with Chicago Public Schools. ³⁸ By 1928 over 1000 cases were in circulation among 386 venues, giving access to the museum collections to as many as 600,000 students. Several traveling exhibits were sent to other institutions in the United States and abroad as examples for the creation of similar systems. ³⁹ The traveling museum also benefitted non-traditional students. At the request of the director of the Washburne Continuation and Trades School, the Field Museum provided several cases for the use of a class of disabled veterans in the hope that they would aid in "removing their handicap through vocational training," as well as aiding the museum's goal to "reach all the people every day of the year." ⁴⁰ The N.W. Harris Learning Collection survives to the present day, though the model of distributing its contents has changed. According to the Field Museum's website, the collection "gives educators and parents a chance to take the Museum's collection to their classroom or home." Materials are available for check-out by schools, classrooms, and

³⁶ Field Museum of Natural History, *Field Museum of Natural History Manual* (Chicago: Field Museum of Natural History, 1922), 27.

³⁷ S.C. Simms, "Development of the N.W. Harris Public School Extension of Field Museum of Natural History," in *Proceedings of the American Association of Museums: Records of the Eleventh Annual Meeting, Washington, D.C.*, May 15-18, 1916, (Charleston, S.C.: Waverly Press, 1916), 57-59.

Field Museum of Natural History, Field Museum and the Child: An Outline of the Work Carried on by Field Museum of Natural History among School Children of Chicago through The N.W. Harris Public School Extension and the James Nelson and Anna Louise Raymond Public School and Children's Lectures (Chicago: Field Museum of Natural History, 1928), 7, 19.

[&]quot;Traveling Museum," Christian Science Monitor.

³⁸ "Traveling Museum Proves Success," *Chicago Daily Tribune*.

³⁹ Field Museum, *Field Museum and the Child*, 9, 16, 19.

⁴⁰ "Traveling Exhibits of Field Museum Aid Ex-Soldier's Study," Chicago Daily Tribune (Chicago), August 2, 1921.

individual families—an idea that Frederick Skiff advocated in 1905⁴¹—but are no longer delivered, and no longer free of charge. Though the modern form of this program differs from contemporary traveling museums as I define them, the goal of greater accessibility underpins both.

The final example of an early traveling museum (and one of the best-publicized) came out of St. Louis and stemmed directly from another world's fair. St. Louis hosted the 1904 Louisiana Purchase Exposition, which is considered to be the most significant exposition since 1893. ⁴³ Informally known as the St. Louis World's Fair, the exposition brought the raw materials that could populate a museum collection. ⁴⁴ The Educational Museum was spearheaded by Superintendent of Instruction F. Louis Soldan and Assistant Superintendent Carl G. Rathmann, both directly inspired by the traveling museum of the Chicago Public Schools run by the Chicago Normal School. ⁴⁵ They solicited the teachers and principals of the St. Louis Public School District to donate exhibit materials for the formation of a centralized educational museum opening in October 1904. ⁴⁶ The museum hit a chord with the students and teachers in St. Louis—the positive response was so overwhelming that Rathmann and Soldan quickly decided to expand the museum. Noting the barrier that travel imposed on many students and impossibility of providing an adequate museum in every school, they opted for a direct-to-classroom delivery model. ⁴⁷ With additional donations of objects furnished by local museums, private companies, and government agencies, the district constructed crates similar in design to those produced in Chicago.

⁴¹ Skiff, "The Uses of Educational Museums," 145.

⁴² "How it Works," *N.W. Harris Learning Collection at the Field Museum*, accessed March 22, 2016, http://harris.fieldmuseum.org/how-it-works.html.

⁴³ Conn, Museums and American Intellectual Life, 139.

^{44 &}quot;The Museum on Wheels," Education Press Bulletin 96 (July 1915), 4.

⁴⁵ United States Bureau of Education, *Educational Museum of the St. Louis Public Schools*, by Carl G. Rathmann, United States Bureau of Education Bulletin, 1914, no. 48 (Washington: Government Printing Office, 1915), 49.

⁴⁶ United States Bureau of Education, *Educational Museum*, by Rathmann, 10.

[&]quot;Educational Museum Collection." *Missouri History Museum Cross-Collections Search*, accessed February 8, 2016, http://collections.mohistory.org/resource/140733.

⁴⁷ James A. Allen, "St. Louis Educational Museum: A Centennial Commemoration," Tech Trends 49, no. 2 (2005), 24.

These were transported first by wagon, then by automobile as early as 1914.⁴⁸ Subjects—including biology, physics, geology, geography, history, art, and several others directly related to the school curriculum—were illustrated with both primary and secondary objects such as slides, charts, maps, and sound recordings.⁴⁹ A teacher's library was amassed in 1905 to supplement the Educational Museum, providing teachers materials with which to educate themselves on the subjects illustrated by the museum boxes.⁵⁰

The St. Louis Public Schools Educational Museum became a staple of public education in the first quarter of the 20th century. The stationary museum, housed from 1904-1911 in an operating school, outgrew its space and was relocated to a defunct school. ⁵¹ The operations of both the traveling and stationary operations of the museum had grown to the point it needed dedicated staff, including a curator; two assistant curators; a librarian; a "repairer," a "checker," and two "packers" in charge of receiving, repairing, repacking, and sending out exhibit crates; a chauffeur; and a janitor, all overseen by the Assistant-Superintendent-in-Charge. ⁵² For the 1912-1913 school year, the stationary museum held 1,750 exhibits, with 7,000 duplicates available for the traveling exhibits. These were in turn supplemented by 4,000 slides, 8,000 stereoscopes, and 2,000 photographs. Between 1905 and 1912, requests for collections increased from 5,111 to 42,993, a growth of 841% in less than 10 years (Table 1). In the 1912-1913 school year, 57,299 collection orders and 12,471 book requests were made by district schools. The stationary exhibits of the museum drew 3,885 visitors in the same year. ⁵³ With all salaries and expenses taken into account, the program cost no more than 9 ½ cents per pupil, per year. ⁵⁴ Again

⁴⁸ United States Bureau of Education, *Educational Museum*, by Rathmann, 11-12.

⁴⁹ Ibid., 12-14, 42.

⁵⁰ Ibid., 44.

United States Bureau of Education. *Visual Education and the St. Louis School Museum*, by Carl G. Rathmann, United States Bureau of Education Bulletin, 1924, no. 39 (Washington: Government Printing Office, 1925), 27.

⁵¹ United States Bureau of Education, Educational Museum of the St. Louis Public Schools, by Rathmann, 45.

⁵² Ibid., 46, 48.

⁵³ Ibid., 47-48

⁵⁴ Ibid., 49.

in 1921, the stationary museum outgrew its building and was moved to a school which was remodeled to accommodate the stationary exhibits as well as the traveling museum's operations.⁵⁵ For the 1923-1924 school year, collections ordered totaled 69,555, books ordered totaled 24,320, and cost per pupil increased to 27 ½ cents per pupil, per year. Total collections housed in the museum building totaled 12,000, with even more in circulation throughout the year.⁵⁶

Table 1: Record of delivery increase

School Year	Museum	Library
	Collections	books
1905	5111	0
1906	14830	300
1907	16690	2708
1908	19153	3368
1909	23452	4368
1910	29939	4790
1911	37954	9030
1912	42994	12471

Source: United States Bureau of Education, *Educational Museum of the St. Louis Public Schools*, by Rathmann. 47.

The traveling museums of the St. Louis School Museum reached their peak popularity in the 1923-1924 school year and began to decline soon after. A major factor in this decline was the growing popularity of film, both as an educational and entertainment tool. By 1923 it began to supplant the museum object because of its ability to show objects in action, as well as the comparative portability of film reels. ⁵⁷ The film collection's portability and replicability was underscored by significant damage to the collection caused by a tornado in 1929. By 1943 the School Museum had moved locations twice before settling into its final home and being renamed the Division of Audio-Visual Instruction. The new function of this division was still to deliver educational materials, but in the form of audio recordings and

⁵⁵ United States Bureau of Education, *Visual Education and the St. Louis School Museum*, by Rathmann, 30.

⁵⁶ Ibid., 27-30.

⁵⁷ F. Dean McClusky, "A-V 1905-1955," *Educational Screen* 34, no. 4 (April 1955), 161.

films rather than three-dimensional objects.⁵⁸ Due to further advances in technology, the program was absorbed by other departments within the St. Louis School District in 2003, and remaining cultural and natural history collections were placed in the St. Louis Public Schools Archives Museum.⁵⁹ Technology may have won the day at the turn of the 21st century, but has proven unable to fill the gap left by interactions with physical museum objects.

The execution of these first traveling museums is more similar to what might now be called "traveling trunks;" however, the ideals behind and goal of traveling museums have remained constant. In discussing the Educational Museum of the Chicago Normal School in 1905, Frederick Skiff expressed the belief that the "broadest purpose of a museum is accomplished on [sic] communities," and that the place where "a museum is located is uplifted by its presence, and in time its influence...is felt by the whole people." 60 Creating a way for the museum to travel out into the community, therefore, would benefit anywhere it was able to be present. Carl Rathmann discusses the St. Louis School Museum as a museum that "does not wait for people to come and gaze at the wonderful things there gathered," but "bring[s] the world to the child." 61 It is a proactive way to pursue museum education. This form of exhibition also targets a specific audience. The Chicago Normal School's Traveling Museum was an answer to the problem that, "The museum of the scientist has...been found unsuited to the needs of elementary education." 62 The developers of the museums adapted their products to fit the needs of the teachers who would use them. They also utilized collections to educate on as many different subjects as possible, as long as they related to school curriculum. The traveling museum cases allowed for materials to be tailored to classroom needs. These programs also relied heavily on a combination of government, private, and corporate support—in some cases supplemented by volunteer efforts. It was up to the

⁵⁸ Jane McCammon, "St. Louis: A-V Pioneer," *Educational Screen* 34, no. 4 (April 1955), 165.

⁵⁹ Allen, "St. Louis Educational Museum," 26.

⁶⁰ Skiff, "The Uses of Educational Museums," 145.

⁶¹ United States Bureau of Education, Visual Education and the St. Louis School Museum, by Rathmann, 12-13.

⁶² Brown, "Materials of Teaching," School and Home Education, 181.

teacher to educate him or herself to be the primary interpreter. The success of the program was measured in the number of collections in circulation and in reserve, combined with the number of annual requests for materials. Finally, these early examples help to emphasize that, "The display rooms...do not constitute the museum. The museum proper, the traveling museum, is found in thousands of boxes, cases, jars, and bottles, ready to go out and do their work in the schools." Today there are many ways in which the ideals of the centrality of community in museum practice, sensitivity to audience, and active public service, may be put into practice; one that keeps reappearing, however, is the idea of a mobile exhibition space for museum exhibits. And it is significant that these programs were termed "traveling museums."

Post-War/Mid-Century Examples

The second "generation" of traveling museums placed museum exhibits into trailers pulled by trucks—something that would previously have been impossible due to trucking technology and the state of American roads. Prior to World War II, the increasing popularity of automobiles and freight trucks put pressure on government at the state and federal level to improve roads across the country. ⁶⁴ Prior to World War I, long-haul trucking was the realm of record-setters and daredevils due to the state of roads and bridges across much of the continental United States. ⁶⁵ Development of a nationwide highway system was first attempted in 1938, when Congress asked the Bureau of Public Roads to study the feasibility of a toll-financed system of superhighways. Some headway was made in the interwar period, but was set back significantly by the outbreak of World War II. ⁶⁶ After the conclusion of the conflict,

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⁶³ United States Bureau of Education, Educational Museum of the St. Louis Public Schools, 46.

⁶⁴ John Williamson, *Federal Aid to Roads and Highways Since the 18th Century: A Legislative History* (CRS Report No. R42140) (Washington, DC: Congressional Research Service, 2012), 5-6. https://www.fas.org/sgp/crs/misc/R42140.pdf.

⁶⁵ James H. Thomas, *The Long Haul: Truckers, Truck Stops & Trucking* (Memphis, TN: Memphis State University Press, 1979), 43.

⁶⁶ Virginia Department of Transportation, A History of Roads in Virginia: "The Most Convenient Wayes" (Richmond, VA: Virginia Department of Transportation, 2006), 39.

Roads Movement re-emerged in 1952, putting further pressure on the government. ⁶⁷ President Eisenhower, who had experienced the worst of American roads during World War I and the best of the German autobahns during World War II, threw his own weight behind the creation of an interstate highway system. ⁶⁸ This culminated in the Federal Aid Highway Act of 1956, which formed the basis of the modern interstate highway system. In addition to providing funds, this legislation regulated the quality of roads to ensure that they would accommodate the increasing size of trucks. Long-haul trucks took on their modern look as early as 1913, but became more common in the 1920s. By that time climate control in the form of refrigerated trailers was being developed. ⁶⁹ However, it was the improvements in breaking, headlights, and shock absorption by the late 1940s that reduced the number of accidents and saved cargo from much of the stress of travel. ⁷⁰ Once the quality of the roads matched the quality of the trucks, museums began to put fully-formed exhibits onto the road.

A prime example of the next generation of traveling museum is the Virginia Museum of Fine Arts' Artmobile. The Virginia Museum of Fine Arts (VMFA) was founded with the purpose of building a state collection of fine art and to educate the public about art. Their original mission from the museum's foundation in 1936 was to "foster the love, progress and understanding of art and beauty for the people of the state." Very quickly, the museum recognized that it could not serve as a mere repository, but must serve the entire state outside Richmond, the city where it was located. Though the museum had developed over seventy traveling museums similar to those used by the first generation of "traveling"

⁶⁷ James A. Wren and Genevieve J. Wren, *Motor Trucks of America* (Ann Arbor: University of Michigan Press, 1979), 200.

⁶⁸ "The Dwight D. Eisenhower Interstate Highway System," *U.S. Army Transportation Museum*, May 15, 2013, accessed April 19, 2016,

http://www.transportation.army.mil/museum/transportation%20museum/interstate.htm.

⁶⁹ Ibid., 94.

⁷⁰ Thomas, *The Long Haul*, 68-91.

⁷¹ David S. Hudson, "The Virginia Museum Artmobiles," *Art Journal* 25, no. 3 (Spring 1966), 259.

museums" for display in schools, colleges, clubs, and smaller museums around the state, it struggled with finding appropriate exhibition spaces, trained art handlers, and interpreters in secondary locations. The museum found a solution in a traveling museum gallery. Keeping in mind the overall institutional goals, the creators of the Artmobile led by Director Leslie Cheek hoped that it would "bring to the people of Virginia opportunities for contact with original works of art," "provide new resources for pleasure," "stimulate intellectual curiosity, create tolerance and offer standards of taste which will pay true dividends in individual growth and in the development of the cultural life of the State." The information it offered was considered an important part of a well-educated and well-rounded citizenry.

In 1953 it commissioned a specially-outfitted, maximum-sized trailer that included air conditioning, fire, and burglar alarms. The space was prepared to transport both two- and three-dimensional pieces of original artwork. Groups of artwork were organized into instructional groups and installed into the trailer. Interpretive labels, exterior panels, and different audio tape recordings (one tailored to children, another high school and older) were prepared for the exhibit, and a preparatory film was made available to introduce audiences to the art on display. All interpretive materials were designed with the public school's curriculum in mind. The whole exhibit was transported by a driver-curator. The inaugural example of an Artmobile exhibit debuted in October of 1953 featuring sixteen Dutch and Flemish paintings. Between October 1953 and June 1954, it visited a total of 50 towns.

Stopping for an average of 2.5 days per town, 53% of visitors were children. 73

From the beginning, the Artmobile was successful in creating opportunities for contact. Each time it pulled into a new town, opened its doors, lowered its staircases, and set out its information booth, people were attracted not only by the ado of its arrival, but also because "they [could] indulge

⁷² Muriel B. Christison, "The Artmobile: A New Experiment in Education," *College Art Journal* 13, no. 4 (Summer 1954), 301.

[&]quot;This culture boom: how real is it?" Kiplinger's Personal Finance 19, no. 10 (October 1965), 39.

⁷³ Christison, "Artmobile," 295-301.

their interest, or curiosity, without too great effort."⁷⁴ The driver curator noted that many visitors expressed opinions about art without having experienced it and without the ability to truly articulate their ideas. For many visitors, both children and adults, the Artmobile's visit represented their first face-to-face contact with original artwork. ⁷⁵ The first Artmobile was popular enough that by 1962, another was commissioned with the goal of expanding the museum's range in the state. ⁷⁶ Two more Artmobiles were created in 1966, responding in part to the 75,000 visitors and 6,000 miles traveled the previous year. Artmobile III was specifically designated to take materials to the VMFA's network of 21 museum affiliates and chapters around the state, while Artmobile IV was a response to the lack of original art available at colleges around the state. Coordinating with the Carnegie Corporation and the University of Virginia, it carried artwork of "major importance" to colleges and universities with art departments lacking teaching museums and collections. ⁷⁷ The program had grown to represent a remarkable example of what collaboration and support between the state, museums, museum trustees, private companies, and universities could achieve.

Though the Virginia Museum of Fine Art's Artmobile program was successful in making high-quality art more accessible to the entire state of Virginia, it eventually proved unsustainable. As early as 1966, the directors of the program admitted to difficulties in finding qualified drivers and seemed unwilling to commit any curatorial staff to travel with the Artmobile. When Artmobile II debuted it was the largest vehicle on the road, requiring special permits and a police escort from destination to destination. On top of the hassles of transportation, its cargo could be worth \$3 million or more. It required a truck driver who was extremely skilled in not only in driving a semi-truck, but also in public relations. As the assistant to the museum programming director described to one newspaper, "[The

⁷⁴ Hudson, "Virginia Museum Artmobiles," 258-259.

Christison, "Artmobile," 295.

⁷⁵ Christison, "Artmobile," 301.

⁷⁶ "Culture boom," 39.

⁷⁷ Hudson, "Virginia Museum Artmobiles," 259-260.

driver] is the only contact most people have with the museum, and what he does or doesn't do can affect our entire image...he should have an interest in—if not a knowledge of—art." The continual transportation also posed significant risk to collections. In the first few years of the program, the trailer skidded and overturned on a patch of icy road. In this instance the museum was incredibly luck in that no paintings or sculptures were damaged. 78 By 1989 the works allowed into the artmobiles were limited to works on paper and durable three-dimensional objects due to worries about road vibration, theft, and other conservation concerns. The touring schedule of the trailers was grueling: some exhibitions were on the road for up to two years, with only 4 condition checks per year back at the museum.⁷⁹ In the final five years of the program, only replicas were allowed in the Artmobiles. By the close of the program in 1994, concerns about heat, humidity, and vibration were all cited as major concerns.⁸⁰ Another major concern was the cost of the program. The initial Artmobile was strongly supported by VMFA trustees, the Virginia legislature, and by private companies. 81 The 1966 expansion also relied heavily on \$176,500 (nearly \$2 million in 2016 dollars) in private donations. The state of Virginia agreed to continue funding the annual costs of the Artmobile program, including the two additional trailers with a budget of \$18,000 each for a total of \$72,000 (nearly \$530,000 today). 82 With rising oil costs, aging museum trailer facilities, and the paradigm shift in museum funding in the 1980s, it is no wonder that the program came to a close in 1994 despite surviving for 41 years. 83

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All totals adjusted via the Bureau of Labor Statistics' CPI Inflation Calculator, www.bls.gov/data/inflation_calculator.htm.

⁷⁸ "Galleries on Wheels Take Art to the People," *Reading Eagle* (Reading, PA), January 30, 1966.

⁷⁹ James Dexter, "1989 Churchill Fellowship Report," (fellowship report, Winston Churchill Memorial Trust, 1989),

^{5-4.} https://www.churchilltrust.com.au/media/fellows/1989 Dexter James.pdf.

⁸⁰ Heather Moon, "WMFA Artmobile 1954," Richmond Times-Dispatch (Richmond, VA), July 12, 2013.

⁸¹ Christison, "Artmobile," 295.

Dexter, "Report," 4.

⁸² Hudson, "Virginia Museum Artmobiles," 260.

⁸³ Kim Lehman, "Museum and marketing in an electronic age," (PhD diss., University of Tasmania, 2008.), 50.

Following closely in the footsteps of the Virginia Museum of Fine Arts, the Wisconsin Historical Society opened the Historymobile on April 22, 1954—the first of its kind in Wisconsin and the seventh historymobile in the nation.⁸⁴ With initial support from Rollohome Corporation (a maker of mobile homes and trailers); the association of Ford Dealers of Wisconsin; later support from A&P, Standard, and Clark Oil Companies; the Wisconsin Legislature; and the Lincoln Sesquicentennial Committee, the Historymobile was housed in a modified mobile home hauled by a pickup truck. The Historymobile sported thirteen cases for hosting history exhibits. Within its first four months, it had served an audience of 70,000 in 200 communities across the state. 85 By 1959, attendance had risen to 152, 478 in 191 counties. 86 For up to 230 days per year, the Historymobile would travel across the state, parking at schools and town halls with much local fanfare. Study guides for both students and teachers were printed and distributed ahead of each arrival. Curators would travel with the Historymobile to provide further interpretation and to answer questions about exhibits.⁸⁷ Though, in the words of the Chief Curator, the "exhibits [were] not intended as definitive, but it is hoped they will stimulate leisurely visits to historic sites and further reading in Wisconsin history," administrators of rural school districts commended the program for providing to rural students the advantages available to urban students.88 In its 23-year run, the Historymobile travelled 77,000 miles and drew a total of approximately 3,112,000 visitors (both adults and students).89

⁸⁴ John W. Jenkins, "Wisconsin's First Historymobile," Wisconsin Academy Review 1, no. 3 (Summer 1954), 20.

⁸⁵ Jenkins, "Fist Historymobile," 20.

John Zimm, "The Wisconsin State Historical Society: Collecting, Preserving, and Sharing Stories Since 1846." In Wisconsin Blue Book 2013-2014 (Madison, WI: Legislative Reference Bureau, 2014), 137.

C. Ford, "Smoke Rings," Wisconsin Magazine of History 37, no. 4 (Summer 1954), 199.

⁸⁶ "Proceedings of the One Hundred and Thirteenth Annual Business Meeting of the State Historical Society of Wisconsin," Wisconsin Magazine of History 43, no. 1 (1959), 71.

⁸⁷ Zimm, "Wisconsin State Historical Society," 137.

⁸⁸ Jenkins, "Wisconsin's First Historymobile," 20.

Letter to the editor by K.O. Rawson, Superintendent of the Clintonville Public Schools, in "Communications," *Wisconsin Magazine of History* 49, no. 2 (Winter 1965-1966), 178.

⁸⁹ "Proceedings of the One Hundred and Thirty-first Annual Business Meeting," 170.

As early as 1959, the program experienced some serious growing pains. The 1958-1959 Director's Report complained that the Historymobile was proving too popular, with too many requests for Historymobile tour stops for the available resources. It was starting to drain the private funds of the Wisconsin Historical Society, with very little monetary recompense. 90 Proportional to the expense, Chief Curator John Jenkins admitted that it was only one solution to the problem of adequately serving the entire state. 91 Despite the fact that the Historymobile featured prominently in Wisconsin's Bicentennial celebration activities in 1976 through 1977, it did not survive into the next year. 92 Due to its expense and the inability of the Historical Society to find alternate funding sources, the Historymobile ended its 23-year journey the winter of 1977. The Wisconsin legislature dropped its funding of three taxsupported positions within the historical society, leading to a domino effect. The financial stress led to a delay in filling an open editorial position, which in turn led to a delay in the society's publications, and finally resulted in the cancellation of any tour plans for the Historymobile's 1977-1978 tour that was to begin in the spring.⁹³ The program did not reappear despite being called one of the "most innovative and important" outreach efforts, and the most distinctive and popular venue for the historical society to interact with local communities, and was absent in the 1979 survey of the state of Wisconsin's property and every survey after.94

These two examples demonstrate the qualities of mobile museums established in the 1950s.

While the first traveling museums were designed to address as many different topics as their audiences required and the museum collections could accommodate, the new mobile museums delved more

⁹⁰ "Proceedings of the One Hundred and Thirteenth Annual Business Meeting," 61-62.

⁹¹ Jenkins, "Fist Historymobile," 21.

⁹² "Director's Report," Wisconsin Magazine of History 60, no. 3 (Spring 1977), 229-230.

⁹³ "Proceedings of the One Hundred and Thirty-first Annual Business Meeting of the State Historical Society of Wisconsin," *Wisconsin magazine of history* 61, no. 2 (Winter 1977-1978), 170.

⁹⁴ Absent from: Wisconsin Legislative Reference Bureau, *State of Wisconsin Blue Book* (Madison, WI: Wisconsin Legislative Reference Bureau, 1979.)

Zimm, "Wisconsin State Historical Society," 137.

deeply into a single subject. Rather than trying to be all things to all audiences, they tended to be directly related to the focus of the museums that created them. The early traveling exhibits were in some cases created out of a surplus of exhibit material to be an independent institution (St. Louis Educational Museum and Chicago Public Schools Traveling Museum), rather than a special outreach program by a larger institution (Field Museum). Just as the previous traveling museums benefitted from the upgrade from horse drawn wagons to automobiles, the mobile museums benefitted from tractor trucks which were capable of hauling larger trailers on better roads. Evaluation still relied largely on attendance numbers and requests for visits, but added the number of venues actually visited and miles traveled to the criteria for success. Museums benefitted from substantial government support in this era, in addition to private and corporate funding. The loss of this support is largely what brought an end to the mobile museums of this time. Lastly, these mobile museums represented a further expansion of audience into rural areas, whereas the traveling museums were primarily focused on serving urban school children. This type of mobile museum (characterized by an original exhibit incorporating original materials installed in a hauled trailer) remained popular until the 1990s, and is still in use in by some institutions today. 95

Developments since circa 1970

From the 1970s onward, tracing a linear development of mobile museums and galleries becomes impossible due to the number of examples founded in and/or surviving from that time. One scholar investigating extension programs in the late 1980s states that the period saw a "rash" of mobile exhibits created mainly by art museums. Many of these failed quickly due to lack of properly trained staff and inadequate funding past the initial start-up costs. ⁹⁶ Looking to the general development of museums in the 20th century, this boom in mobile programs in the 1970s echoes the overall boom in the

⁹⁵ See Appendix A.

⁹⁶ Dexter, "Churchill Fellowship Report," 5.

number of museums characteristic of the 1970s and later.⁹⁷ With this boom came more of the same types of exhibitions, as well as a diversification of the types of activities and exhibitions placed in mobile museums and mobile galleries. Of the examples my research has followed, none were founded in the 1980s. I attribute this to the economic recession in the United States, prompted by the energy and gas crises of the previous decade, ⁹⁸ which resulted in a loss of funding from all levels of government. This forced museums to find alternate sources of funding to maintain operations. ⁹⁹ As museums scrambled to find adequate funding after the loss of government support, I hypothesize that outreach programs such as mobile museums and galleries were a low priority. By the late 1990s, museums had recovered due to a shift in the funding model that blended corporate and private support with minimal government contributions. ¹⁰⁰ Mobile museum initiatives pick up again at the same time. ¹⁰¹ While the examples discussed below are not comprehensive, they provide an impression of the range of mobile museums, galleries, and exhibits developed during and since the 1970s.

Some of the museums founded early in this third "era" of mobile museums represented continuations of what had been done before. The ARTmobile founded by the Bucks County Community College (PA) in 1976, housed in a 48-foot semi-trailer, was initially conceived as a bicentennial project to carry an exhibit about American folk art to school children. Today, it continues to carry original works of fine art to the 13 school districts and other public sites around the county, presenting lessons about the principles of art with tie-ins to school curriculum. One staff member suggests the reason for its longevity lies in the relationships it has with individual schools that consistently request visits year after year. It is

⁹⁷ Franklin W. Robinson, "Learning by Looking: The Future of Museums," in *Museum Philosophy for the Twenty-first Century*, ed. by Hugh H. Genoways, 161-164 (Lanham, MD: Altamira Press, 2006), 161-162.

⁹⁸ "The International Energy Crisis of the 1970s," narrated by Joan Neuberger, 15 Minute History, *University of Texas at Austen*, January 15, 2014, https://l5minutehistory.org/2014/01/15/episode-38-the-energy-crisis-of-the-1970s/.

⁹⁹ Lehman, "Museum and marketing in an electronic age," 50.

¹⁰⁰ Ibid.. 51.

¹⁰¹ See Typology Database, Appendix A.

Endowment for the Arts, with additional support provided by private and corporate donations. ¹⁰² There is nothing particularly new or innovative about this approach to museum art education and exhibition, but this program has proved enduring and popular with the community it serves. On the history side of the museum world, the Florida Historical Society's Traveling History Museum also continued in the footsteps of earlier institutions. With a combination of funding from the U.S. Office of Education and the Historical Society, it produced a mobile exhibit to travel throughout seven counties in north-central Florida and educate local children about Florida history. Unlike the previous example, it disappears from the record almost immediately—possibly due to lack of funds past the initial exhibit. ¹⁰³

The American Museum of Natural History also produced mobile exhibits, naming them "Moveable Museums." Put into practice in 1992, this outreach initiative was targeted towards the New York City Public Schools. Though it was initially a collaboration with other museums, it released its first individually-produced trailer in 1998. At its peak, the program boasted a fleet of four retrofitted Winnebago RVs featuring mobile exhibits on paleontology, anthropology, and astronomy. In 2010 it hosted 22,144 visitors between the fleet, though the museum estimates that they can accommodate up to 25 thousand visitors per truck, per year if they are sent out four days each week and participate in occasional special events. The program's largest expense was its staff—9 members at its peak, 5 in its later years. The job of the educators was described as "grueling." The salaries were funded entirely by corporate sponsorship, totaling approximately \$408,000 per year. 104 The program came to an end in

¹⁰² "Artmobile," *Bucks County Community College*, accessed March 29, 2016. http://www.bucks.edu/news/culture/artmobile/.

[&]quot;Bucks County Community College Artmobile," *Friday Arts*, WHYY-TV Philadelphia Public Television (Philadelphia, PA: WHYY, November 5, 2010).

¹⁰³ "Historical News," Florida Historical Quarterly 47, no. 3 (1969), 341-342

[&]quot;Historical News," Florida Historical Quarterly 46, no. 1 (1967), 86.

[&]quot;Mobile Museums (on a truck): History and science delivered," *Idea.org*, April 27, 2011, accessed March 30, 2016. http://www.idea.org/blog/2011/04/27/mobile-museums-on-a-truck-history-and-science-delivered/.

2012, with the donation of the anthropology-focused Moveable Museum truck to a smaller local museum. The beneficiary of one of these was the Suffolk County Historical Society in Long Island, New York, which adapted the museum to an educational exhibit related to their mission and collection. The Moveable Museum appears to have toured only one exhibit, starting in March 2013, likely due to lack of sponsors. No mention of the program exists past this date, suggesting the end of life for this mobile museum vehicle after 20 years. ¹⁰⁵

By the early 2000s, the designers of mobile museums and galleries began to innovate. In addition to mobile exhibits created by larger institutions, for the first time independent mobile museums begin to appear. Beyond exhibiting and educating, these programs began to advocate, collect, create, and curate experiences rather than exhibits. They also began to combine these activities in new ways. The following examples provide instances of each activity.

Most mobile museums and exhibitions have sought to educate their audience, whether in a general subject (i.e. art or natural history) or a more specific subset (i.e. Florida history). Contemporary mobile museums and exhibits begin to explore hyper-specific subjects or raise awareness about a problem or cause. The Disability Rights Museum on Wheels was established in 2015, in collaboration with the ADA25 Legacy Project celebrating the 25th anniversary of the Americans with Disabilities Act of 1990. The initial construction and start-up was funded completely by Wells Fargo and Ernst & Young. It is a specially designed 48-foot trailer to relate in an interactive way the history of the fight for the rights of people with disabilities in an accessible space, in the sense of both geographic accessibility, as

[&]quot;Profile: Jeff Rodgers," *American Museum of Natural History*, accessed March 30, 2016. http://www.amnh.org/learn/pd/astro/profiles/jrodgers.html

[&]quot;Moveable Museums Make Trip to D.C.," *YouTube* video, 0:55, posted by the American Museum of Natural History, October 27, 2010, https://www.youtube.com/watch?v=x0NZzEQ3xno.

¹⁰⁵ "Museum of Natural History rolls into town," *Riverhead News Review*, March 25, 2013, accessed March 30, 2016, http://riverheadnewsreview.timesreview.com/tag/suffolk-county-historical-society/page/3/.

¹⁰⁶ "America's Disability Rights Museum on Wheels – Partners," *USBLN*, accessed 31 March 2016, https://www.usbln.org/ada25-legacy_partners.html.

well as accessibility for people with disabilities. Additionally, it was created with the intent of providing opportunities for businesses, governments, schools, and communities with tools for promoting inclusion. ¹⁰⁷ In its first year, it drew approximately 10,000 visitors over the course of 32 stops, each of which was hosted by a corporate sponsor. The project was initially planned from June 2015 through July 2016, but has been extended to the end of 2016 due to its popularity. ¹⁰⁸ This example follows the trend towards corporate sponsorship behind museum exhibits, thus this "popularity" should be considered with care. With nearly 10,000 visitors over the course of 32 events, average attendance was approximately 312 per event. Compared with other well-funded traveling exhibits discussed above, this is a relatively modest number. I suggest that much of the "popularity" of the program lies with its corporate sponsors who benefit from the positive image generated by the mission of the project.

Another example of a mobile exhibit space used for advocacy is the University of Virginia

Learning Barge. Completed in September 2009, the program website describes itself: "Located on the most polluted tributary of the Chesapeake Bay, the Learning Barge provides interactive K-12 and adult education about how the river ecology and human activities are inextricably linked." Partnered with local schools and The Elizabeth River Project—a non-profit organization devoted to restoring the Elizabeth River ecosystem—the barge is used as a field station, classroom, training center, and workshop. Each time it moves its activities change slightly, but the overall focus of educating about what people can do as stewards of the estuary. 109 The barge was specially constructed by architecture students from the University of Virginia and is held by the Elizabeth River Project. The barge was constructed for just over \$1 million with \$165,000 allotted for yearly expenses, from a combination of

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¹⁰⁷ Mark Miller, "Launching America's First Disability Rights Museum on Wheels," *Interactive Accessibility*, March 16, 2016, accessed March 31, 2016, http://www.interactiveaccessibility.com/news/launching-americas-first-disability-rights-museum-wheels#.Vv18bqQrKhc.

¹⁰⁸ "US Business Leadership Disability Rights on Wheels 2016 PROMO," Vimeo video, 2:48, posted by "Integrated Global Strategies LLC," March 14, 2016, https://vimeo.com/158952233.

¹⁰⁹ Phoebe Crisman, "The Learning Barge," *University of Virginia School of Architecture*, accessed March 31, 2016, http://www.arch.virginia.edu/projects/learning-barge-0.

government grants, corporate donations, and in-kind donations from hundreds of smaller donors. This is supplemented today by a charge of \$7 per student. A significant problem for the program is the nature of its mobility, namely that they rely on tug boats to haul the barge. So far, tug services have provided this for free. The use of tug boats also limits where the barge may be docked for visitors to embark. 110 The mobile nature of this space allows for visitors to learn about a specific river's ecology while experiencing it in person. One may argue that it turns its surroundings into the exhibit, providing interpretation within the barge.

Some independent mobile museums have begun to display art differently than has been attempted in the past. Similar to the specialization of some mobile exhibits, galleries such as the Artstream Nomadic Gallery make a point of "putting contemporary ceramic art on the street." 111 Thirteen artist have joined together to provide original pieces of ceramic art to travel across the country in a refurbished 1967 Airstream trailer. The program is supported by the Rosenfield Arts Foundation of Texas, the Continental Clay Company, and the Julia Terr Foundation for Ceramic Arts. Since 2002, they have traveled to over 150 locations in cities across the United States. 112 This confederation of artists takes the power to display their work to the public into their own hands, extending their audience on their own terms.

Some independent mobile museums have taken on a distinct collecting focus. The Sketchbook Project describes itself as "a crowd-funded sketchbook museum and community space." Founded in 2006, it now holds a growing collection of 34,215 artists' books contributed by professional and amateur artists from around the world. The project maintains a "storefront exhibit space" in Williamsburg, New York, but sends up to 4,500 pieces of the collection on the road in its "mobile library." It travels

¹¹⁰ Robin Dunbar, "The Learning Barge," Green Teacher 94 (Fall 2011), 31-34.

^{111 &}quot;About," Artstream Nomadic Gallery, accessed March 31, 2016, http://www.art-stream.com/about/.

¹¹² Mary Barringer, et al., "Cups on Loan," Ceramics Monthly 58, no. 3 (March 2010), 30.

throughout the year to share sketchbooks with communities nationally, participating in pop-up events at galleries and museums across the country. ¹¹³ Anyone may contribute to the collection by purchasing a notebook from the project ("standard" or "digitized"), filling it according to a few parameters, and sending it to the project to be catalogued. The "digitized" sketchbooks are tagged and made searchable for free online. ¹¹⁴ Its ongoing mission is to "[nurture] community-supported art projects that harness the power of the virtual world to share inspiration in the real world" by "focusing on the intersection of hands-on art making and new technology," and is entirely self-supported through donations, fees paid by the hosting institution, and the sale of notebooks and merchandise. ¹¹⁵ The notebooks are distributed and viewed from the mobile platform rather than collected, but supports the overall mission of collection by raising awareness and putting collections to use.

If the above example draws comparisons with a library or bookmobile, the next is comparable to an archive. StoryCorps was founded in 2003 with a mission to "preserve and share humanity's stories in order to build connections between people and create a more just and compassionate world." It was initially conceived as an audio recording terminal placed in New York City's Grand Central Station—a prime place for people to find it. In 2005, two "MobileBooths" in renovated Airstreams were launched from the Library of Congress to travel the country and record people's stories. Collaborating with public radio stations, cultural institutions, and community-based organizations to advertise and invite residents to come record. People enter the traveling booths to conduct an interview, facilitated by a StoryCorps staff member. These stories are then made available through broadcast on National Public Radio, online through its own website and through YouTube, and through published books. All interviews are

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¹¹³ "Welcome to the Sketchbook Project," *The Sketchbook Project,* accessed April 1, 2016, https://www.sketchbookproject.com/about.

¹¹⁴ "Participate," The Sketchbook Project, accessed April 1, 2016, https://www.sketchbookproject.com/participate.

¹¹⁵ Caroline Cox, "Q & A With The Sketchbook Project's Steven Peterman," *Common Creativ ATL*, June 3, 2015, accessed April 1, 2016, http://www.commoncreativatlanta.com/?p=6829.

¹¹⁶ "A 10-year Roadtrip: StoryCorps Mobile Tour," YouTube video, 1:53, posted by "StoryCorps," September 17, 2015, https://www.youtube.com/watch?v=Rk2pbqZJnvM.

archived at the American Folklife Center at the Library of Congress. Major supporters include nonprofit corporations (i.e. Corporation for Public Broadcasting), for-profit corporations (i.e. Subaru), and the National Endowment for the Arts. ¹¹⁷ In this case, the mobile space is the space in which stories are collected, rather than where they can be experienced by a larger audience. This example differs from most other mobile museums, but I have included it because of its connection to an established collecting institution (i.e., the American Folklife Center).

Some mobile exhibits and museums use their space as a memorial. The 9/11 Never Forget

Memorial Exhibit was created in 2013 as a museum operated by the Tunnel To Towers Foundation. This
non-profit is meant to honor the memory of Stephen Siller, a New York firefighter who died on
September 11, 2001, as well as all those who lost their lives on that day, and to educate about the 9/11
attacks. The exhibit drives across the country providing interactive education through artifacts,
documentary videos, recordings of first-responder radio transmissions, and tours led by New York
firefighters. There is no charge for the exhibit, which is operated by volunteers and funded by private
donations and corporate sponsorship. Its tour takes advantage of "high-profile events" such as state
fairs, across the country to draw larger audiences. 118

Conducting research is another function of these mobile museum spaces. The PlayCube out of Dartmouth College is the experimental mobile unit of the Tiltfactor Laboratory, a design initiative that makes games geared towards social change. The PlayCube is the lab's public outreach venue, acting as a space for performance, demonstration, exhibition, and research. It has been designed for "interdisciplinary investigations and events" on and around the university campus, and to attract

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¹¹⁷ "About," StoryCorps, accessed April 1, 2016, https://storycorps.org/about/.

^{118 &}quot;9/11 Never Forget Exhibit," Tunnel2Towers.org, accessed April 1, 2016,

http://tunnel2towers.org/activity/never-forget-exhibit/.

¹¹⁹ "PlayCube," *Neukom Institute*, November 2, 2013, accessed April 1, 2016, http://neukom.dartmouth.edu/projects/playcube.html.

"curious passersby to engage with creative ideas – and especially those who might not frequent arts events or a museum." ¹²⁰ It was built with the support of two co-funders: the Leslie Center for the Humanities and the Neukom Institute, both institutions within Darmouth College. So far, the high-tech monitors and internet connection have been used to capture gameplay and collect data for research into how role playing games can affect social change. ¹²¹ This is only one function of this particular project—something that is true of many modern examples of mobile exhibits and mobile museums.

The final example I will discuss is a mobile exhibit space that were designed specifically as multipurpose spaces. Though often not created by museums or explicitly to be museums, they offer the opportunity for institutions to create an exhibit or event that turns the space into a museum. For example, the Vermont chapter of the American Institute of Architects-Vermont in Hanover, Vermont has designed an outreach space dubbed the Archistream Design Resource Center and Mobile Gallery.

Housed in a refurbished Airstream, the Archistream is intended to act as a mobile outreach, education, and design center. 122 It is equipped with a high-end audio-visual system that can be used in a multitude of ways. This flexibility also encourages partnerships with other local organizations. It is not mean to be a static exhibit space, in location, topic, or outreach activity. 123 Finished in 2014, the project was funded by a \$42,750 grant from the AIA Repositioning Initiative. 124 In September 2015, the space went on tour as a gallery carrying work by the artists of Frog Hollow, Vermont. 125 Importantly, such a generic space must be proactively promoted because it cannot generate its own programming and is dependent upon

¹²⁰ "PlayCube," *Tiltfactor* (blog), August 1, 2009, accessed April 1, 2016. http://www.tiltfactor.org/playcube/.

¹²¹ Keith Chapman, "Dartmouth Mobile Research Lab on the Green this Summer," *Dartmouth Now*, July 12, 2012, accessed April 1, 2016, http://now.dartmouth.edu/2012/07/dartmouth-mobile-research-lab-green-summer.

¹²² "On The Road: AIAVT Architects to Transform Vintage Airstream into Mobile Education Center," *AIA Vermont*, accessed April 1, 2016, http://www.aiavt.org/outreach/archistream/on-the-road-aiavt-architects-to-transform-vintage-airstream-into-mobile-education-center/.

¹²³ "Taking it to the Streets," *American Institute of Architects*, November 22, 2013, accessed April 1, 2016, http://www.aia.org/practicing/AIAB100660.

^{124 &}quot;On the Road."

¹²⁵ Archistream Design Research Center / Mobile Gallery's *Facebook* page, accessed April 1, 2016, https://www.facebook.com/vermontarchistreamproject/.

the weather. As of April 2016, the last event that the Archistream participated in was an art fair in October 2015. 126

As this form of museum outreach evolved, the pros and cons that developed often relate to mobile museums and exhibits today. The overall mission has always been to make museum education more accessible to the public, from the early traveling museums featuring authentic artifacts and specimens to the multi-purpose mobile museum spaces in use today that emphasize an educational experience over objects. They offered a way for museums and institutions seeking a museum-like exhibit space to be proactive in reaching out to audiences, and later reactive to the self-defined wants and needs of the museum's community. These spaces have sought to be innovative, from the creation of miniature exhibit cases distributed to classrooms, to the adaptation of a climate-controlled and vibration-dampened semi-trailer, to the inclusion of high-end digital devices and interactive activities. Similarly, many institutions considered these projects to be experimental. This is not true for all mobile museums or exhibits, but many imitated institutions that broke new ground either with creative programming or new technology. In nearly every successful case, the arrival of the mobile museum was a special event worthy of fanfare and attention, a special opportunity for the community or institution that hosted it.

However, the success of these programs over time necessitates a significant commitment of both funding and staff time—they cannot be afterthoughts. Many examples uncovered for this research were able to launch the program and produce one or two exhibits before running out of money for further exhibits and vehicle and trailer maintenance. Similarly, considerable staff time must be devoted to the production of exhibits in addition to staffing and transportation of the mobile museum. In the case where a museum found itself gifted with a mobile trailer unexpectedly, a similar pattern occurred

126 Ibid.

and the mobile exhibit was out of use in about a year. Museums interested in this form of education outreach should take into account all of these details before committing resources towards the creation of a mobile museum or exhibit. When collections are exhibited in mobile museums, they are subjected to greater risk than in stationary galleries. This must be taken into consideration when designing exhibits.

The final issues that institutions should consider when approaching a mobile outreach project such as this are not necessarily obvious from the history, but from contemporary climate, audiences, and trends. Mobile museums/exhibits are by-and-large parked outdoors; unless the mobile museum/exhibit is large and well-equipped enough to control its own climate, these exhibits are dependent on both weather and the season. In many cases—the Virginia Museum of Fine Arts Artmobile, Wisconsin History Mobile Historymobile, AIA Vermont Archistream, to name a few—the mobile museums operate on a touring schedule during the late spring, summer, and early fall. Another concern is these programs' effect on the environment. Though no studies have been done regarding mobile museums' pollution levels, a parallel can be found in food trucks. Because they are usually not connected to the electrical grid, many food trucks rely on gas-powered generators for their power. In addition to releasing greenhouse gases in generating power, they pollute as they travel from venue to venue. Though mobile museums do not need to generate as much energy because they are not typically used to prepare food, they produce the same types of pollution. As global warming becomes increasingly serious, museums must consider the costs, benefits, and ethics of causing further pollution.

III. Typology

Differences in the missions of mobile museums often result in differences in how they operate—for example, both the StoryCorps project and the Sketchbook Project are centered on collection, but one space is meant to distribute what has been collected, while the other actively collects in the mobile

space. Regardless of these differences, all fall into one of three distinct types: Exhibition-focused, Facilitation-focused, and Collection-focused. These three types are not mutually exclusive; most often, the idea of the space as a facilitative one is attached to either collection or exhibition.

Exhibition-focused mobile museums/exhibits use a travelling gallery space to stage and educational exhibition. This is further divided into sub-types: Accessible exhibitions are produced by existing museums or institutions in order to take their collection or education mission from the brick-and-mortar exhibition out to underserved communities. Underserved communities may be determined by geography, disability, age level (i.e. adapted for children), or disinterest or discomfort with visiting the museum building for any reason. This sub-type represents the first type of mobile museum, chronologically. Independent Museums are programs that are not attached to an existing, anchored museum but whose main exhibition space is manifested by the mobile museum trailer. Often, this type of mobile museum represents a specific agenda or topic that is hyper-focused and may be controversial. Examples of Accessible exhibition-focused mobile museums include the Artmobile of the Virginia Museum of Fine Arts and the Moveable Museum of the American Museum of Natural History, while the 9/11 Never Forget Memorial Exhibit exemplifies the Independent sub-type.

Facilitation-focused mobile museums are less about exhibition and more about facilitating an experience in the mobile space. This experience may range from a conversation, an art project, a meal, a lecture, a class, or any other type of event. This is an excellent way for museums to do outreach that may be less focused on education. It also offers a means of collaboration with other community organizations. With these partnerships come further opportunities to expand museum practice, increase the number and types of stakeholders, and strengthen their social capital and public profile with the community they serve. Examples include the Vermont chapter of the AIA Vermont's Archistream trailer.

The last type of mobile museum is Collection-focused. This type of mobile museum takes special advantage of the mobile nature of the space in order to collect a wider sample from their community, regardless of its size. This collection may be physical, digital, or informational. The collecting encompasses material brought to the space, created in the space, or generated in the space (in the case of research), or it distributes materials for later collection and display. Examples of this include the StoryCorps Mobile Booth and the Sketchbook Project's mobile collection. 127

I hope that this typology may be used in the planning of future mobile museums and exhibits.

For almost a century, these spaces were designed to perform one function. As museum practice changes to better reflect the needs of their communities and the realities of the industry today, museum outreach cannot continue to move in a single direction. If museum employees are increasingly expected to be able to be all things to all people, more must be expected from all museum spaces. By identifying the three main functions found in past and present examples of mobile museums, I hope that future outreach and education professionals take them into consideration when designing future mobile museum programs.

IV. Discussion

Pendulum Swings

Mobile museums have been affected by changing educational methods and approaches to museum practice. In the early twentieth century, there was a shift away from verbal education towards audio-visual education. The initial effort behind the earliest traveling museums was to bring objects into classrooms to help illustrate the concepts presented by the curriculum. These methods (especially educational films) were employed to great effect by the military during World War II, refined, and found

 $^{\rm 127}$ For more examples of each of these categories, see Appendix B

their way into the classroom after the war. There was a national shift towards audio-visual education through film, which students found especially engaging. At this same time, the St. Louis Public Schools Educational Museum moved away from the use of artifacts towards the sole use of audio-visual technologies. The object is devalued in favor of the contextual information surrounding it. Since the beginning of the twenty-first century, there has been a countermovement towards the importance of the museum object in the face of new technology, especially the internet. Technology once again takes the supporting role of providing context to fully flesh out the museum object when visitors are face-to-face with it in a museum space. 129 There is a renewed interest in both the object and the experience, in addition to the knowledge conveyed. A "boom" in the foundation of new mobile museums that rely on objects that started at approximately the same time, reflecting the same desire for authenticity.

There have also been shifts in the treatment of collections. Mobile museums were initially created as a response to the glut of collections materials in cities that had hosted world's fairs. The educational value of collections was valued over their condition: replacement specimens and artifacts were obtained by both the Chicago Public School Museum hosted at the Chicago Normal School and the St. Louis Public Schools' Educational Museum. ¹³⁰ Those founded in the 1950s were designed to make high-quality museum collections available to underserved communities. As exemplified by the Virginia Museum of Fine Art's Artmobile, there were measures taken to protect the art while traveling in the trailer (air conditioning, burglar alarms, vibration reduction). At this same time, the first museum conservation institute (the International Institute of Conservation for Historic and Artistic Works) was

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¹²⁸ Amo DeBernardis and Edward G. Olsen, "Audio-Visual and Community Materials – Some Recent Publications," *Educational Leadership* 5, no. 4 (January 1948), 256-257.

¹²⁹ Henriikka Vartiainen and Jorma Enkenberg, "Learning from and with museum objects: design perspectives, environment, and emerging learning systems," *Education Technology Research and Development* 61, no. 5 (2013), 842-843, doi 10.1007/s11423-013-9311-8.

¹³⁰ United States Bureau of Education, *Visual Education and the St. Louis School Museum*, by Rathmann, 28. Waterman, "Use of Traveling Museums in the Public Schools of Chicago," 715.

founded. ¹³¹ By the time many of these mobile museums closed between the late 1970s and late 1980s, concern for collections was cited as a major reason for the end of several similar artmobile programs. ¹³² Collections care was becoming standard practice, prioritized over collections use. ¹³³ Today there is shift back towards the use of collections in education as a part of the overall shift towards the educational function of museums in the late 1990s/early 2000s. ¹³⁴ This again coincides with the resurgence of mobile museums. While I found no examples of this, the use of education collections by mobile museums is a natural fit because it is understood that the collection is meant to be consumed and eventually discarded after items may no longer be used in an educational way. ¹³⁵ Concerns about the environment in which they are exhibited and used are mitigated by the educational function of the object. This may be more possible museums that do not primarily exhibit art. It is unlikely that art museums have an educational collection comprised of their finest collections. This creates an unfair bias towards underserved communities if only second-rate artists are made available. However, the Bucks County ARTmobile is able to walk this line and may serve as a model.

Benefits of Mobile Museums

There are several opportunities afforded by mobile museums that are not afforded by traditional museums. They represent a museum space that is incredibly reactive and sensitive to the needs of the community they serve. To bring in one last example, the Philadelphia History Truck epitomizes this flexibility. It was conceived as a way to tell the story of every part of Philadelphia using information from all sources, "from library records to oral histories, from old crumbling sidewalks to

¹³¹ Chris Caple, "An Introduction to Preventive Conservation," in *Preventive Conservation in Museums*, ed. by Chris Caple (London: Routledge, 2011), 9.

¹³² Dexter, "Report," 5.

Darrell Green to Commissioner of the Kansas Arts Commission, November 3, 1989, Wichita Art Museum.

¹³³ Caple, "An Introduction to Preventive Conservation," 9-10.

¹³⁴ George Hein, *Learning in the Museum* (London: Routledge, 2002).

¹³⁵ Shane J. MacFarlan and Eileen Johnson, "Education Collections as Museum Collections," *Curator* 47, no. 1 (2004), 102.

refurbished loft apartments, from death records to new babies on the block." The current focus of exhibits is on the history of particular neighborhoods, with an eye towards increasing civic engagement and overall sense of community. In their published process, the first step is to partner with neighborhood associations and build a relationship with the community before any research begins on the community's history. As work on the exhibit progresses, the community is consulted in every step. After each exhibit opens, it is downsized into the truck to travel to different communities across the city. ¹³⁶ The museum represents a set of professional skills and a space rather than a collection, and the community makes up the audience as well as the content. As more exhibits are produced relying on more individual communities, the museum builds a network between them resulting in a web of relationships. Though this project is an independent museum, the model could be adapted by a larger institution as a model of community outreach.

On a more internal note, mobile museums in the hands of larger institutions effectively convey their brand outside the museum's walls. Museums often overlook branding as a strategy for expanding outreach efforts, despite its potential to effectively bring attention to the institution's role within the community. By providing the space in which museum exhibits and activities may be enjoyed, the museum can continue to exert control over the presentation of the museum's message and to influence visitor experience without many of the negative perceptions that might be associated with the museum building itself. A similar case may once again be found in bookmobiles. Early public libraries in the United States exerted great control over the experience of visitors, including access to materials, to behavioral rules, to segregation by gender and race in the reading room. With the rise of the mobile library, forward-thinking librarians were able to relax these rules and provide more room for patrons'

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¹³⁶ "About the Truck Project," *Philadelphia Public History Truck,* accessed April 18, 2016, https://phillyhistorytruck.wordpress.com/about/.

¹³⁷ Diane L. Viera, "Strike Up the Brand: Creating or Enhancing Your Museum's Brand Identity," *History News* 60, no. 4 (2005), 1.

choice. Even after the atmosphere of the library building began to change after World War II, the public perception of the rules did not. Bookmobiles were widely seen as more accessible than the monolithic institution that was the "public library." ¹³⁸ By being seen out in the community and interacting with the public on an person-to-person scale, mobile museums represent an opportunity for larger museum institutions to take advantage of the cultural capital generated by this type of interaction. It is vital, however, that museum staff in the mobile museum be made aware of the role they play in representing the museum at a hyper-local level.

MoCOLAB

Within this history and typology, the MoCOLAB is a mobile exhibit space that has been designed generically with the intention of being used by as many stakeholders as possible, in as many ways as possible. Thus, it may fall into any of the types in the above typology depending on with whom it collaborates. Though the TULE/MoCOLAB collaboration appears to align most closely with the Exhibition function, it has served more of a Facilitation function. The TULE exhibits are adapted from exhibitions in the Haricombe Gallery of Watson Library at KU. If one were interested purely in the exhibit, the gallery is the ideal place to go. But by photographing the cases and printing large poster recreations, the information of the exhibit is made available to an audience outside the library with minimal cost, time, and risk to exhibit materials. Any attendance at each TULE/MoCOLAB event represents an expansion of audience. By appearing at special events in Lawrence and Kansas City, the collaboration has aided in off-campus visibility. This in turn aids in breaking down the barrier between the wider public and the university libraries observed by Exhibits Director Sarah Goodwin Thiel. Staff were present at all MoCOLAB events to answer questions about both the exhibit and the MoCOLAB at each event. Another aspect of this program that has worked well so far is the limited time of each appearance

¹³⁸ Pawley, "Blood and Thunder on the Bookmobile," 268-282.

Not everything about the fall 2015 appearances of the TULE/MoCOLAB was perfect, however. Visitors rarely took the time to read all of the information presented in the exhibit and were often more interested in the story of the MoCOLAB. The explanation of the collaboration still served in the interest of the TULE program and served as outreach for KU Libraries, but not exactly as intended and shifted the program's chief function into Facilitation from Exhibition. Adequate publicity was also a challenge in these first events—there was no solid plan for social media communications on Twitter and Facebook, resulting in an overly informal approach that did not reach beyond the immediately involved institutions (KU, KU Libraries, the MoCOLAB, and the social media presence of the host institution). The events attracted between 30 and 40 people, with the largest crowd attracted during the debut. This audience was largely made up of KU administrators and alumni, who were already aware of KU Libraries. Though it expanded awareness of library exhibits and outreach, it did not extend to the wider community. Because there have only been three TULE/MoCOLAB events as of April 2016, the program is still new and can still experiment with publicity via social media.

Because of the limitations of the MoCOLAB's heating and cooling abilities, it can only be comfortably used in the spring, summer, and early fall. Though the trailer can run its lights from the battery for several hours, any other power must be supplied by extension cord from nearby buildings or by portable generator. The generator produces both air and noise pollution, which is not ideal for the environment or visitors. Another issue is that of transportation: the MoCOLAB is relatively new and undiscovered, and therefore it has been transported free of charge by one of the co-designers, Nils Gore. As the program gains popularity, a more practical transportation plan needs to be put into place.

Lastly is the problem of evaluation. The exhibit is meant to promote the Haricombe Gallery exhibit, as well as to educate on the topic of the exhibit. Though some visitors may read the labels of the exhibit and come away with more knowledge on the topic, it is virtually impossible to measure how many people make the trip onto campus to see the original exhibit. The gallery exhibit includes an

optional exit survey, which visitors rarely fill out. No exit survey has yet been included at MoCOLAB events. With the exception of attendance, all data collected so far has been haphazard.

There are several options for solving some of these issues. As future events are planned and less attention must be paid to logistics, more attention can go into evaluation and publicity. Already, an evaluation worksheet has been drawn up for future staff members to conduct evaluation in a more consistent manner. Throughout the history of mobile outreach programs, attendance has been the most consistently recorded evaluation of success. The nature of the TULE program is to act as an extension of the presence of the libraries off campus. Therefore, awareness of the library increases as more people encounter the TULE/MoCOLAB exhibit and tracking attendance remains a good indicator for success of the publicity value. The educational value, in the meantime, will continue to be the most difficult aspect to evaluate, as is the case in so many museums of all types. The TULE coordinator has contacted a transportation company to handle hauling the MoCOLAB should the need arise. The issue of pollution would require more funds, but could be remedied with the addition of solar panels or other forms of renewable energy. In the future, a more careful publication plan can also be laid out to remind the public at more regular intervals via social media, and to explore other forms of communication that host venues have found effective. This will aid in attracting members of the public who have less of a connection to the University of Kansas, and therefore less awareness of Library activities and services.

The MoCOLAB continues to flesh out its role in the KU academic community. In addition to serving as an exhibit space for the TULE program, it has served as a meeting site for the MoCOLAB board, a screening theater for a visiting artist to the Spencer Museum of Art, and a lecture space for Healthy Communities Wyandotte (a government organization). ¹⁴⁰ Each individual event relies on a single function of the MoCOLAB's multipurpose space. No partners have been interested in the multipurpose

¹³⁹ See Appendix C.

¹⁴⁰ Events recalled by searching "#mocolab" on Twitter.

space as a space that can function in a multitude of ways, perhaps due to the nature of the events or the lack of precedent. I see the opportunity for a partner to take advantage of the chameleon-like nature of the space and use it in multiple ways for a single event. Beyond the multiple uses, the programming that goes into the trailer can be designed to be easily set up and taken down. In the case of the first TULE exhibit, it could be set up by two people in less than an hour and taken down slightly faster. With careful planning, it can easily be transformed from a gallery, to a meeting space, to a presentation space for lectures, to a theater, to any other number of spaces. The ideas for events that could be hosted in this space are not restricted by function, only size. This multi-functionality in combination with the quick turnaround time could make it an optimal space for events such as a small conference, a multi-part class requiring spaces for different activities, or a new hybrid of educational events. The mobility of the MoCOLAB opens the possibility of a "progressive" event that uses different locations for different functions, all tied together by the trailer's striking chrome aesthetic.

V. Conclusion

In entering into this line of inquiry, I was faced with answering the questions: When and why did they come to exist? Who is the audience? What kinds of mobile exhibits and museums have been developed? Are they sustainable in the contemporary museum industry? In writing a short history of the concept of mobile museums and exhibits, distilling the historical and contemporary examples I encountered into a typology, and situating the MoCOLAB/ TULE collaboration and my experiences in that typology, I propose answers to each. The creation of mobile museums and mobile exhibits was a response to museums' perennial quest to both educate and expand their audiences. The first examples sprang from the creation of many major museum institutions in large cities after hosting world's fairs or similar exhibitions that brought in large amounts of cultural, scientific, and economic material. This then trickled down to smaller institutions as more museums were founded and technology advanced and became more affordable. Though these programs may have failed or stalled during wartime or

economic downturn, institutions keep returning to this form of outreach. Though many focus on an audience of children in public schools, pains are taken to provide tiered programming to accommodate a larger age range. Though the details of programming differ greatly, from science to traditional art and history exhibits to recording an interview for posterity, three general types appear: Exhibition-focused, Facilitation-focused, and Collection-focused. More traditional mobile museums/exhibits fall into the first category, while more recently developed examples fall into the latter two. Many examples may combine one, two, or all three into one space. This is the case with my experience with the KU Libraries TULE collaboration with the MoCOLAB, which falls into the Exhibition and Facilitation categories.

The last question is perhaps the most complex: are mobile exhibits a sustainable outreach method in the current museum industry and looking into the future. I argue they are, as long as we look at examples from the history of mobile museums/exhibits and learn from the successes and failures represented there. Perhaps the most important facet of planning a mobile exhibition is that institutions should be aware that the program must be adequately supported after it is created. One way to mitigate the drain on resources is collaboration with other community organizations. Early examples collaborated mainly to ensure reaching an intended audience, as evidenced by how the Field's traveling museum tailored its offerings to fit the curriculum of the Chicago public schools. Today collaboration can influence programming as well as audience. Programs like the AIA Vermont Archistream and MoCOLAB seek out partners to provide most of the content. If a museum creates its own mobile exhibit space, then it can build community connections and increase public input, in addition to reducing the amount of staff time that goes into creating programming. If museums are not able to create their own mobile space, then they can collaborate with other local museums and institutions which have a space, or institutions which tour nationally with a mobile gallery. If museums are unable to commit the resources to operating a mobile exhibit continuously, collaboration with another institution holding a trailer such as the MoCOLAB for short-run exhibitions or special events can offer some of the same benefits

(visibility, education, facilitation of a memorable experience, etc.) as a long-term program. Interested museums should also embrace the innovative nature of this kind of project. The very first examples were born out of a willingness to take risks with untried outreach methods. Technology has always been an important factor of this in mobile exhibitions and museums. Spaces like the PlayCube are outfitted with high-end technology, waiting for partners to bring their own programming that takes advantage of it. As always, the use of technology should be backed up with content.

The world in which museums operate continues to speed up and diversify; therefore, museums must find ways to keep up without compromising museum practice. Mobile museums and exhibit spaces offer one way in which museums can nimbly educate, respond to community needs. It also allows for museums and museum-like institutions to dispose of the stationary portion altogether.

Museums have always taken lessons from the past—this type of outreach is one more instance of a "relic" reinventing itself to be useful into the future.

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Appendix A: Mobile Museums, 1900-Present

Green-colored rows refer to direct influences to the MoCOLAB as identified on the MoCOLAB blog at KUMoCOLAB.org

Name/Title	Location	Begin date	End date	Description	Funding Details	Basic Function	Other Notes:
Traveling Museum, Chicago Public Schools	Chicago, IL	1902	1912	Complied after the Columbian Exposition of 1893 because teachers realized how useful it was to be use concrete examples to back up teaching of geography. In the form of small boxes containing specimens, text, pictures. Similar to a traveling trunk. Eventually transferred to a university, Chicago Normal School, because the program became too large and popular for the original organizers. By 1909 has 60 traveling collection boxes.	Supported by dedicated organization, then Chicago Normal School	Exhibition (General Education, Science Emphasis)	specific subject; original materials
St. Louis School Museum	St. Louis, MO	1905	1943	Traveling museum to schools with illustrative materials; after 1904 exhibition in STL. By 1915, mounted on an "automobile truck"		Exhibition (General Education, Science Emphasis)	specific subject; original materials
Field Museum	Chicago, IL	1913	present	Exhibits and models from Field Museum delivered to public schools, and later other schools, to aid in education.	N.W. Harris donation/endowment	Exhibition (General Education, Science Emphasis)	original materials and replica; specific subject
Artmobile, Virginia Museum of Fine Arts	Richmond, VA	1953	1994	4 Traveling Galleries "Loaded with art treasures" to schools in all areas of the state; 34-foot-long air-conditioned trailer with museum-grade amenities	Virginia Federation of Women's Clubs; department store Miller & Rhodes	Exhibition (Art)	original materials
Historymobile, Wisconsin State Historical Society	Madison, WI	1954	1977	Features original exhibits on Wisconsin History, with authentic artifacts, touring around Wisconsin; modified mobile home pulled by pickup truck	Wisconsin State, Corporate, Museum Trustees	Exhibition (History)	original materials
Artmobile	Little Rock, AK	1960	present	"Artmobile has been serving the state for over 50 years and is one of the nation's very few mobile art museums. This unique gallery space features themed exhibitions of works from the Arkansas Arts Center's permanent collection. Works are carefully selected for their artistic integrity and educational value. The Artmobile is a perfect source of arts exposure for schools, libraries, festivals, and more!"	Arkansas Arts Center, corporate and private donors	Exhibition (Art)	original materials
ARTmobile, Pinellas County/Tampa, FL	Pinellas County/ Tampa, FL	early 1960s	Present	The goals of this program include giving students opportunities to experience art and cultures they might not ordinarily have a chance to see. Every effort is made to ensure that all students who enter these ARTmobiles have a meaningful learning experience that affords them enrichment, understanding, enthusiasm and an introduction to a lifelong appreciation of art. Expands to 2 in 1988.	Partners include Pinellas Public Schools, University of South Florida Art Museum (Tampa)	Exhibition (Art)	Original Materials

Northeast Wyoming Mobile History Lab	Newcastle, WY	1966	1980s? (mid/late)	large bus that traveled to rural and urban schools in Weston and Crook Counties and provided mini-museums in the schools, "28-foot vehicle loaded cases with old photos, old-fashioned household items and small pieces of ranch equipment" to teach about history of that part of the state	Anna Miller Museum	Exhibition (History)	original materials
Mobile Gallery Program, Wichita Art Museum	Wichita, KS	1967	1980	exhibits art from the Wichita Art Museum in towns and cities across Kansas; collaborating with local schools and teachers	Federal Title III Elementary and Secondary Education Grant Friends of the Wichita Art Museum Kansas Arts Commission	Exhibition (Art)	original materials
Mobile Museum, William Penn Memorial Museum	Harrisburg, PA	1968	1995	The Mobile Museum extended the educational and outreach programs of the William Penn Memorial Museum by acquainting the Commonwealth's citizens with their historical and cultural heritage with a series of traveling exhibits mounted in a converted tractor trailer. The Mobile Museum traveled to fairs, schools, historical societies, and other seasonal locations providing capsule exhibits on site for half-days or several days.	Pennsylvania Historical and Museum Commission (state)	Exhibition (History)	
Traveling History Museum	North-central Florida	1969	?	Florida history exhibit traveling to 7 north-central counties;	Florida State Historical Society; U. S. Office of Education	Exhibition (History)	Original Materials
Mini-Natural Science Museum	Philadelphia, PA	1969?	?	live animal show, conservation movie	Philadelphia Academy of Sciences	Exhibition (Science)	original materials
Art Resources Traveler	Urbana, Illinois	1967	1971?	Designed under the state's Office of the Superintendent of Public Instruction with the objective of stimulating interest in the arts and offering students the chance to learn about them; "specially designed and equipped," contributions of art from several museums; provides materials and training to teachers beforehand; offers adult and children's programming; tractor trailer includes a slide projector system, film projector, and interior/exterior sound system. 15 visitors at a time for 30 minutes.	Federal funds, State funds	Exhibition (Art)	original materials
Mobile Museum	National, based in Indianapolis, IN	1976	1977	Featured the exhibit, "American on the Move," touring nationally for the Bicentennial. In January 1977, retired to Indianapolis Children's museum for use in the state.	Indianapolis Children's museum, American Red Ball Transit Company	Exhibition (History)	Related to an event or anniversary
Artmobile	Newtown, PA	1976	present	Artmobile is an art museum for all ages housed in a 48-foot semi-trailer. It travels throughout Bucks County from September to June, visiting all 13 school districts and many public sites.	Bucks County Community College	accessible art exhibition	original materials; excellent website

VanGo!	St. Harrisburg, PA	1992	present	The Susquehanna Art Museum's VanGo! Museum on Wheels program brings original works of art to your school for an innovative cultural arts program that connects the visual arts and academics and provides an exciting, engaging, and educational experience for all ages!	Susquehanna Art Museum	accessible art exhibition	original materials
Moveable Museum	New York City, New York	1993	2012	American Museum of Natural history, 37-foot retrofitted Winnebago. (The Moveable Museum vehicles covered topics including anthropology, astronomy, and paleontology, providing free, hands-on museum experiences to K-12 students across the five boroughs of NYC.) Donated to Suffolk County (NY) Historical Society.	Corporate Sponsors	Exhibition (Science)	
Rolling Plains Art Gallery	Fargo, ND	1993	2007?	A climate-controlled semi-trailer which traveled to communities in North Dakota and Minnesota. The semi-trailer not only transported the artwork, but also served as the gallery itself. To create a richer experience, an art educator travelled along with the select pieces from the permanent collection. The Rolling Plains Art Gallery is not currently touring. Tours North Dakota and Minnesota in alternating years.	Plains Art Museum	Exhibition (Art)	
Story Bus	Chicago, IL	2001	present	"A Children's Museum on Wheels!" Educational classroom on early childhood literacy	Dolores Kohl Education Foundation.	Facilitation	
Artstream Nomadic Gallery	Carbondale, CO	2002	present	The Artstream Nomadic Gallery has been putting contemporary ceramic art on the street since 2002. It is a traveling exhibition space housed in a restored 1967 Airstream trailer. Based in Carbondale, CO, over the past 14 years it has exhibited in more than 150 locations, from Los Angeles to New York, Houston to Minneapolis. Housed in 1967 Airstream Safari Travel Trailer. It was remodeled and designed in collaboration between Artstream and Colorado State University's, digital fabrication program taught by Del Harrow and assisted by Camilla Friedman-Gerlicz.	Rosenfield Arts Foundation of Texas; Continental Clay Company Julia Terr Foundation for Ceramic Arts CSU digital fabrication (construction + design)	Exhibition (Art)	original materials
StoryCorps MobileBooth Tour	Touring Nationally	2005	present	collecting interviews for American Folklife Archive, LoC; "America's oral history project"; converted an airstream trailer; partner with local public radio stations, cultural institutions, and community based organizations; manned by trained facilitators; collect the story, give it back as a recording to participant	NPR, Story Corps, Corporation for Public Broadcasting	Collection	banks on the feeling of including in something larger; also, potential to be broadcast on NPR
The Sketchbook Project	Housed in Brooklyn, NY; Global tour	2006	present	Crowd-sourced library that features 33,910 artists' books contributed by creative people from 135+ countries. Brooklyn Art Library is our storefront exhibition space in the heart of Williamsburg, Brooklyn. The Sketchbook Project takes its collection on the road throughout the year to share sketchbooks with communities far and wide. Transports thousands of Sketchbooks to cities across North America for pop-up events at museums and galleries. All of the books on board being searchable by many different criteria that each visitor can explore. The Mobile Library holds about 4,500 sketchbooks from the collection. All books return to the permanent collection Brooklyn Art Library after they are finished with their tour. Books are crowdsourced, sent in from around the world.	sales and donations	Collection, Exhibition	more similar to traditional book mobile

Mobile Literacy Arts Bus (MLAB)	Syracuse, NY	2008	present	"Artist-run, renovated recreational vehicle that exists as a flexible space open to community members' proposals for alternative educational and cultural programming."	Syracuse University	Exhibition (Interdisciplinary)	
The PlayCube	Dartmouth U. Hanover, NH	2009	present	Equipped for flat panel video display, wireless video display collection, gaming units, sound, and projection. It is meant to travel around Dartmouth/Hanover area for interdisciplinary investigations and events; esp. to move screen from desk of researcher into community. Lab to conduct research, and expose a broad audience to the research; "Dartmouth's inventive place for untraditional events, artworks, and outreach" "For anything that doesn't fit into a normal space"	Commissioned by the Neukom Institute and the Leslie Center for the Humanities, Dartmouth U.	Collection, Exhibition, Facilitation	Fabricated, then seek other stakeholders
San Francisco Mobile Museum	San Francisco, CA	2009	2013	Experimental; short-run exhibits that appear in store fronts, parks and social spaces; They span high participation, locally grown creations, to randomly curated concept-driven exhibits. "pop-up" museum; Maria Mortati		Exhibition (Art) Collection Facilitation	
Van of Enchantment	Santa Fe, New Mexico	2009	2011 ?	Take exhibits to underserved rural communities, New Mexico History Museum; specially refitted RV camper. Mission: "The Van of Enchantment's outreach mission is to promote public awareness of the role of the State of New Mexico's museums and monuments as stewards of the state's cultural heritage, and to create an ongoing relationship between the state museums and monuments with the people of New Mexico. This mission is maintained and nourished through a number of actions, including collaboration and partnership with Department of Cultural Affairs and other state and community agencies, traveling to each of the 33 counties of the State of New Mexico with one or more outreach programs, gathering new cultural information from New Mexicans through outreach activities, and maintaining an interactive and informative website that encourages return visits on a regular basis. Admission is free."	New Mexico Department of Transportation	Exhibition (History)	website up-to-date until 2011; dedicated website no longer active; Director: Kimberly Mann
UVA Learning Barge	Norfolk, VA	2009	present	Utilizing architecture students to design and construct the barge for community/university engagement and children's education about the environment and ecosystems of the Chesapeake Bay and the Elizabeth River.		Exhibition (Science)	
"Freedom Express"	Chicago, IL	2010	2012 ?	computerized interactive exhibit in 45-ft RV; travels to Chicago middle and high schools		Exhibition (History)	specific subject
"Never Forget" Mobile Exhibit	New York City, NY touring nationally	2013	present	1,000-square-foot tractor trailer features video, audio, artifacts, a twisted piece of World Trade Center steel and firefighter tools; very devoted to mission in the title	Stephen Siller Tunnel To Towers Foundation	memorial	
"Moveable Museum", Suffolk County Historical Society	Suffolk County, NY	2013	????	Present Algonquin history and culture to the people of Long Island	AMNH; "seeking sponsors"	Education on a topic	some media attention paid to initial exhibit, but nothing past 2013

Philadelphia History Truck	Philadelphia, PA	2013	Present	The Philadelphia Public History Truck (PPHT) is a mobile museum devoted to telling the story of Philadelphia considering all of its parts from library records to oral histories, from old crumbling sidewalks to refurbished loft apartments, from death records to new babies on the block. The PPHT community curatorial experience involves the community in gathering, planning, and designing each exhibit, making it possible to connect all people to the process of museums. PPHT's current curatorial focus is on neighborhood exhibits with the intention to increase local civic engagement and connect Philadelphia communities; make culture accessible throughout the city	Temple University, Local Businesses; Neighborhood associations;	Events, Exhibition, collection	
Museum on the Move	Lafayette, LA	2013 late	present	Public History students will outfit a vintage Airstream trailer with an interpretive exhibit that will then hit the road to take history directly out of the classroom and to the public. Exhibits will be created on a rotating basis; "crowdsourcing"	University of Louisiana - Lafayette	Exhibition (History)	Curated by rotating classes, tied to graduate student work. Have done an exhibit on daily life in LA, asking people to bring in objects to be digitized; "with the public, not for the public"
University of Iowa Mobile Museum (MoMu)	Iowa City, IA	2014	present	Inspires visitors to understand the world by bringing exhibits with cutting-edge research, one-of-a-kind artifacts, and interactive digital media to lowa's communities statewide. We promote interdisciplinary partnerships and collaborations to present UI research and stimulate understanding, appreciation, and pride for the University of Iowa and the state.	UI Vice President for Research and Economic Development, the Office of the State Archaeologist, the UI Museum of Natural History, and the Old Capitol Museum.	interdisciplinary exhibitions	independent exhibits/original materials
The Traveling Museum	New London, MN touring nationally	2014	present	Designed and curated by Rural Aesthetic Initiative, The Traveling Museum functions as a mobile project space for public art. Pop up gallery exhibitions, didactic art activities, happenings, individual artist projects, and mobile art residencies are all feasible within the Museum's efficient fish house inspired architecture. We bring contemporary art places it never gets to go.	Rural Aesthetic Initiative, Grants	exhibition, creation, collection?	

AIA Vermont Archistream Design Resource Center / Mobile Gallery	Burlington, Vermont	2014	present	21-foot 1969 Airstream Globetrotter into a mobile outreach, education, and design center over the course of the next six months. This project was made possible by AIA Vermont when the acquired a grant from AIA National Innovation Fund. After the trailer is transformed, AIA volunteers will take the vehicle on the road to various communities around the state and be used in a multitude of ways. Their goal is to engage the general public and shed light on the positive contributions architects can make.			
The Natural History Museum	Brooklyn, NY	2014	Present	Launched in September, 2014, The Natural History Museum is a new, mobile museum that offers exhibitions, expeditions, educational workshops, and public programming. Unlike traditional natural history museums, it makes a point to include and highlight the socio-political forces that shape nature. The museum's programs appear within existing institutions, in its 15-passenger mobile museum bus, and online at http://thenaturalhistorymuseum.org. The Natural History Museum is a dues-paying member of the American Alliance of Museums. The Natural History Museum establishes a space for looking at science.	A Blade of Grass Voqal Fund Chorus Foundation Overbrook Foundation Horton Foundation Fund Compton Foundation Benoona Fund of RSF Social Finance Andy Warhol Foundation The New York Community Trust Solidaire Eyebeam Center for Art & Technology Queens Museum Materials for the Arts Build It Green Tri State Biodiesel	Exhibition (Science)	
Wonders on Wheels	Santa Fe, New Mexico	2015	present	Reformulation of the "Van of Enchantment" for NM state libraries. Similar mission, new administration. "The Mobile Museum exhibits will be sourced from DCA establishments with the same curators, educators, and designers that we use in our museums"	NM Department of Cultural Affairs	Exhibition (History)	
Disability Rights Museum on Wheels	National	2015	present	A 48-foot interactive traveling museum touring America, the "Museum on Wheels" tells the story of the fight for equal rights by people with disabilities in the United States, celebrating the journey of dedicated activists, advocates and legislators who transformed their status from objects of heartless discrimination, fear and isolation, to full participants of mainstream society. Brought to life is their long struggle for equality, their hard fought victories, and insights into what still needs to be done.	corporate sponsors; United States Business Leadership Network	Exhibition (Special Topic, History)	related to a specific anniversary or event

Appendix A Sources

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Appendix B: Mobile Museum Typology

Type:		Description	Examples
Exhibition Focus	ed	use of traveling gallery space to stage an exhibition focused on education	 VMFA Artmobile AMNH Moveable Museum Museum on the Move (Lafayette, LA) Wisconsin State Historical Society Historymobile
Sub-Type:	Accessible Exhibition	The exhibit is created by an existing museum; usually focused on bringing the museum experience to underserved communities, especially schools in rural areas	Wisconsin State Historical Society Historymobile VMFA Artmobile
Sub-Type	Independent Exhibition	The exhibit is not attached to an existing, anchored museum; the trailer is the primary exhibition space; often comes with a very specific agenda or topic—hyper focused on this. Memorial is a subset of this	 Artstream Nomadic Gallery (Carbondale, CO) Philadelphia History Truck
Facilitation Focused		The space is less about exhibition, more about facilitating some sort of experience; this may be conversation, an art project, a meal, a lecture; aligns well with Nina Simon and participatory museum; an excellent way for museums to do outreach, to collaborate with other community entities; to encourage breaking with conventional museum practice and interdisciplinary collaboration	 AIA Vermont Archistream Design Resource Center/Mobile Gallery Syracuse University Mobile Literacy Arts Bus (MLAB) Dartmouth University PlayCube
Collection Focus	ed	The mobile capability of the space is taken advantage of in order to collect a wider sample from the community, whether physical, digital, or informational. In some cases, material is brought to the space; in others, it is created at the space; in some cases, information is collected at the site; lastly, the space may become a laboratory in which research can be conducted.	 StoryCorps MobileBooth The Sketchbook Project

Appendix C: MoCOLAB Evaluation Worksheet

Program Report:
MoCOLAB at [Location], [Event]
[Date]

Attend	ance:
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•	[Start Time-End Time]
•	MoCOLAB attendance: ##

Overheard Conversations:

•

Other Observations:

•

Adapted Checklist:

1. Choose a Date, Time, and Location

Questions to Ask	Observations
Where was the event?	
Was the space conducive to conversation?	
What was the date/time/conditions at the event?	Discuss with collaborators. Due to heating, cooling, lighting, and availability of an external power source (generator) this can be considered useful throughout the day and in a variety of weather.
How long did it last?	2 hours recommended.

2. Prepare for the MoCOLAB exhibit event.

Questions to Ask	Observations
How did we advertise?	
Did we have music and/or refreshments?	
Did we have places where people could sit?	
Are the interactive elements prepared?	

Who transported the moCOLAB to venue?	
3. Implement the MoCOLAB exhibit event.	
Questions to Ask	Recommendations*
Effectiveness of facilitators?	
Did participants know what this program was by the time they left?	
Were people comfortable?	
4. Follow Up	
Questions to Ask	Recommendations*
What worked well?	
What didn't work well?	