The Getty Research Portal: a decade of progress and developments for the future

Megan Sallabedra

At its inception in 2012, the Getty Research Portal shattered barriers that previously made digitized resources for art historical research challenging to locate and use without restriction. The Portal's first 10 years were marked by a period of immense growth, forging connections among collections through institutional partnerships. Flexible metadata requirements for contributing to the Portal allows large and small institutions alike to contribute a diverse range of collections but also present ongoing challenges. Work with partner institutions to identify priorities for metadata creation, cataloguing, and imaging has contributed to collection building on a global scale. Various forms of access to Portal materials have been developed alongside collection development efforts to meet new methods in art historical research. Looking to the future, the goals that were set out when the Portal was initiated continue to be the driving force behind what the Portal provides for an ever-evolving field. Ongoing work on the platform is intended to meet the shifting methodology of art historical research through the Portal's established collaborative model and open the door to new questions, new lines of inquiry, and ultimately new conclusions within art history.

Soon after its launch in 2012, the Getty Research Portal, an early outcome of the collaborative Future of Art Bibliography initiative,[1] emerged as an exceptional resource for the study of art history and a new model for disciplinary research. Where at its inception the Portal shattered barriers that previously made such resources challenging to locate and use without restriction, by 2022 its first decade brought a ten-fold growth in available texts, with a vast collection of digitized published material contributed by institutions across the globe and freely available to access. The Portal's first 10 years were marked by a period of immense growth, forging connections among collections through institutional partnerships.[2] Various forms of access to Portal materials have been developed alongside this growth to meet new methods in art historical research. Looking to the future, the goals that were set out when the Portal was initiated: providing access to art historical materials, collaboration through coordinated digitization efforts, providing resources for the field, and to foster new knowledge creation continue to be the driving force behind what the Portal provides for an ever-evolving field.

The Getty Research Portal was born out of an innovative vision for its time that aimed to address the changing nature of art historical research in the digital era by aggregating access to digitized materials on art and art history. At first envisioned collaboratively among some of the earliest contributors,[3] the Portal was then fully developed and supported by the Getty Research Institute (GRI), setting the stage for several effective collaborative efforts within international art library and research communities. Internally the Getty Research Portal is likewise built upon collaboration. The team supporting the platform is overseen by the Chief Librarian, with a full-time dedicated staff member managing the project and liaising with technical staff and contributing institutions. As one of the contributing institutions, the Portal team also includes imaging specialists, cataloguers, and library assistants helping to digitize the GRI's materials for inclusion on the platform.[4]

1. A record of the Future of Art Bibliography initiative is regularly updated at: https://www.getty.edu/projects/future-art-bibliography/

2. A full background of the Portal's inception and work to frame the project is detailed in: Kathleen Salomon, "Facilitating art-historical research in the digital age: the Getty Research Portal," *Getty Research Journal* No. 6 (January 2014): 137–41, https://doi.org/10.1086/675796.

3. The Avery Architectural & Fine Arts Library, Heidelberg University Library, Frick Art Reference Library, Getty Research Institute, and the Institut national d'histoire de l'art, each with specific strength in digitized publications relevant to art historical research, commenced an initial phase of collection development leading to the Portal's launch.

4. Many of the roles critical to the maintenance and growth of the Getty Research Portal are outlined in the following: Tristan Bravinder, "The people behind the Getty Research Portal," News & Stories (blog), August 6, 2018, https://www.getty.edu/news/the-people-behind-the-getty-research-portal/. While many of the people have changed, the roles remain the same.

At its launch in 2012, Getty Research Portal materials came from eight founding contributors distributed across the United States and Europe. By 2022 the Portal had 45 contributors from around the world, 47 at the time of this writing.[5] This expansion has resulted in an impressive collection of over 215,000 digitized volumes, representing more than 190,000 titles, which continues to grow with ongoing digitization at partner institutions and as new contributors join the project. Content spans 65 languages and covers 11 centuries of scholarship – including material on modern and contemporary art and new perspectives on historical works and periods of cultural production. Eleven Virtual Collections have been developed so far; enabled by the Portal's ability to aggregate metadata, these curated collections allow researchers to view a grouping of examples beyond what a single library visit affords.[6] The Portal's reach extends far beyond its contributors' locations, as it has been used by scholars from 147 countries across the globe. The Portal is also a resource for countless images – something that cannot be quantified through the metrics currently utilized to document site usage but is invaluable for the field of study the Portal supports.

The early days of the Portal focused on collection building – in the first three years after the Portal's launch the number of volumes accessible through the platform doubled from 20,000 at its launch to 40,000, and by 2016 there were 100,000 digitized art history texts accessible through the Portal.[7] In 2021 40 contributing institutions made more than 180,000 records available through the Portal, and by 2022 the records accessible represented an increase 10 times over from its founding.

The Portal's technological infrastructure has played a pivotal role in its growth and functionality. It was built by an internal team at Getty as a bespoke product and published quickly to facilitate the site's launch. In 2016 robust work building out features and infrastructure commenced, beginning with a site relaunch that year that also introduced features including individual pages for each text, responsive design for computers, tablets, and mobile devices, added search filters, and the inclusion of edition details into record displays.

Five years after the Portal's launch, in 2017, the site's first contributors from Asia[8] and Eastern Europe[9] began adding volumes and 2018 saw the Portal's first contributing institutions from South America.[10] The infrastructure underlying the Portal, which allows for metadata to be contributed in a variety of formats, with minimal required fields, was instrumental in the team's ability to drive this international growth. In 2018–2019 several new features addressed usability for accessing records. The Portal team also developed newer modes of access for Portal records during this time, such as an embedded Internet Archive viewer that allows researchers to browse and read without leaving the Portal platform for contributors using Internet Archive to host digitized materials. Additionally, support for International Image Interoperability Framework (IIIF)-compliant records now provides Portal users an even greater ability to compare volumes, and to zoom in on high-resolution images of the digitized publications.

Metadata gathering and transformation have been ongoing challenges for the Portal due to the diversity of institutions contributing records. The platform can ingest records for the Portal in MARC, MODS, Dublin Core, and a custom CSV template. Records can be contributed via email, file transfer protocol, or harvested directly from contributor sites. The minimum required metadata for records contributed to the Portal comprises just three components: title, unique identifier, and URL to digitized material. This maintains a low barrier to entry for institutions with little metadata support but means that some records have fewer points of discovery. Even for records with robust metadata, the same resource can be described in vastly different terms owing to local institutional standards and workflows. While this flexibility has allowed large and small institutions alike to contribute a diverse range of collections to the Portal, it also means that it continues to be difficult to offer a comprehensive search of Portal materials. Streamlining metadata contributions could be possible with the addition of a metadata specialist to the Portal team that would help manage ongoing quality control of regularly harvested records, as well as provide support for smaller institutions that might not have the bandwidth for metadata creation or formatting. However, questions of metadata authority and institutional autonomy are important considerations before committing to this kind of intervention.

To aid in discovery, the Portal team has worked to integrate one aspect of the Getty Vocabularies Art & Architecture Thesaurus (AAT)[11] into the Portal's search functionality for the 'type' field. Approximately 500 terms from the Portal have

5. A full list of contributors to the Getty Research Portal can be found at: https://portal.getty.edu/contributors

6. A current list of Virtual Collections can be found at: https://portal.getty.edu/virtualcollections

7. Annie Rana, "The Getty Research Portal grows with a new design and more digitized volumes," News & Stories (blog), June 14, 2016, https://www.getty.edu/news/getty-research-portal-grows-new-design-100000-digitized-volumes/.

8. In 2017 the Tokyo National Research Institute for Cultural Properties (https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=Tokyo%20National%20Research%20Institute%20for%20Cultural%20Properties) joined the Portal through a collaborative agreement, discussed in more detail later in this paper.

9. Croatian Academy of Sciences and Arts: https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=Croatian%20Academy%20of%20Sciences%20and%20Arts

10. Espigas (Tarea-IIPC, UNSAM / Fundación) (https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=Espigas%20(Tarea-IIPC,%20UNSAM%20~2F%20Fundaci%C3%B3n)), Pinacoteca de São Paulo (https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=Pinacoteca%20de%20S%C3%A3o%20Paulo), Universidade de São Paulo, School of Architecture and Urbanism (https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=Universidade%20de%20S%C3%A3o%20Paulo,%20School%20of%20Architecture%20and%20Urbanism) and Instituto de Investigaciones Estéticas, UNAM (https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=Instituto%20de%20Investigaciones%20Est%C3%A9ticas,%20UNAM) all joined the Getty Research Portal between 2018–2019.

11. More information on the structure and scope of the Art & Architecture Thesaurus is available at: https://www.getty.edu/research/tools/vocabularies/aat

been associated with AAT terms. These terms identified for use in the Portal's 'type' field incorporate matching terms from other languages as well as all variants. For example, one can search by type for 'auction catalog' and receive results not only in English, but also in German (*Auktionskatalog*), and in French (*Catalogue de vente*). Of course, this capability is contingent on the cataloguing of the contributing institution including such terms in their records.

Through a collaboration with colleagues at the Getty Provenance Index (GPI)[12] the Portal team worked to integrate Portal records with the Provenance Index database, adding integral access to auction catalogues associated with provenance research. Portal records containing 'Lugt numbers,' the numbering system created by Frits Lugt to identify art auction catalogs[13] can be matched to corresponding sales in the GPI. Portal records can also be identified by 'type' as described above and then filtered to specific dates of known sales as another method of identifying potential matches between the two platforms. Through these methods, 3,655 Portal catalogue records were matched with 2,711 GPI sale description records as part of the initial matching project. Links to Portal records were then included with any known match in the GPI database, allowing provenance researchers direct access to digitized copies of auction catalogues along with relevant annotations included in them.[14] This work remains ongoing as new records are added to the Portal.

A data download feature[15] has been developed to address interest from institutions to incorporate Portal records into local discovery catalogues and has opened the door for other means of expanding access to Portal records via additional points of discovery through cross-platform partnerships.[16] Portal records are regularly exported as JSON and XML files and made available for reuse. Integration with shared catalogue tools like the Ex Libris Central Discovery Index[17] could also provide an opportunity for libraries using systems such as Primo or Summon to include Portal records in their local search results. While this endeavour requires mapping work and considerations regarding duplication and metadata transformation, it holds the potential to broaden access even further.

Along with the aspiration of bridging diverse collections, the earliest conversations framing the Portal underscored the importance of foundational bibliographies as a basis for collection development. From the beginning, however, it was acknowledged that recognized bibliographies leave out many legacies of art and cultural production. Pursuing other means of systematic bibliographic work will be important work in the years ahead. Continuing to pursue partnerships with potential contributors in addition to cultivating ongoing institutional relationships and developing Virtual Collections are all part of ongoing work toward collection development.

Over the years, the GRI has worked closely with some of its partner institutions to identify priorities for metadata creation, cataloguing, and imaging. A partnership with Heidelberg University Library has resulted in hundreds of books digitized,[18] with individual titles identified and prioritized from major bibliographies as well as citations from Duke University's Dictionary of Art Historians.[19] A partnership with the Tokyo National Research Institute for Cultural Properties (Tobunken) was commenced in 2017 which has facilitated the digitization and contribution of more than 2,100 records for titles from several collections held by the institution. Feedback from scholars using the Portal platform to research art from Japan has highlighted the value of access to the resources made available by Tobunken, many of which have been difficult to access outside of Japan until they were made available on the Portal.[20] The Portal now includes more than 14,000 Japanese records – an area of collection building the Portal team is actively working to expand.[21] Tobunken was the first institution in Asia to contribute materials to the Portal, and the relationship between the GRI and Tobunken has opened up the possibility of collaboration with other institutions in the region.

As part of its commitment to filling gaps in the literature accessible on the platform, the Portal team is exploring the possibility of providing mobile scanning equipment to partner institutions that might not otherwise have access to digitization technology. A pilot project initiated in 2019 using a mobile scanning station serviced by Internet Archive aimed to scan materials at the Philosophical Research Society in Los Angeles. While this project faced challenges due to the pandemic, it is now being revisited with the hope of expanding beyond the GRI's region.

12. The Getty Provenance Index can be accessed at: https://piprod.getty.edu/starweb/pi/servlet.starweb?path=pi/pi.web

13. Frits Lugt, *Répertoire des catalogues de ventes publiques, intéressant l'art ou la curiosité, tableaux, dessins, estampes, miniatures, sculptures, bronzes, émaux, vitraux, tapisseries, céramiques, objets d'art, meubles, antiquités, monnaies médailles, camées, intailles, armes, instruments, curiosités naturelles, etc., par Frits Lugt.* (La Haye: La Haye, M. Nijhoff, 1938–1987., 1938).

14. Getty Provenance Index Research Database Editor Eric Hormell and Anne Rana worked closely to identify matching records between the two platforms and create links to the Portal from the GPI. Their efforts were outlined in the following: Eric Hormell and Anne Rana, "Cross-departmental collaboration: the Getty Provenance Index, the Getty Research Portal, and enhancing research capabilities on art auction catalogs" (Presentation, Convergence = Collaboration + Creativité, ARLIS/NA 49th Annual Conference, May 12, 2021).; Eric Hormell and Anne Rana, "Enhancing access to digitized art auction catalogs: a collaboration between the Getty Research Portal and the Getty Provenance Index" (Poster, Together/Apart, SAA Annual Meeting: ARCHIVES*RECORDS 2021, August 2, 2021).

15. The Portal's data files can be downloaded at: https://portal.getty.edu/faq and by clicking on the links provided under the section "Can the Portal's records be downloaded for reuse in other discovery systems?"

16. The Digital Cicognara Library utilizes the Portal's data download feature to systematically collect relevant digitized publications on a separate project site: https://cicognara.org; for a more in-depth discussion of the project see: Holly Hatheway, Roger Lawson, and Charlotte Oertel, "The Digital Cicognara Library: transforming a 19th century resource for the digital age," *Art Libraries Journal* 45, no. 2 (April 2020): 47–54, https://doi.org/10.1017/alj.2020.2.

17. https://exlibrisgroup.com/products/primo-discovery-service/content-index/

18. Heidelberg University Library, "Retrodigitization of art and classical studies literature for the Getty Research Portal," https://

At this point in the Portal's growth the Virtual Collections feature of the site, which leverages the expertise of subject specialists within the Getty and at partner institutions, is seen as an integral component of the platform for the coming years. The Portal presents a unique opportunity to make connections and draw comparisons across institutions and plans to continue growing this feature are envisaged to aid in discoverability and build context for the ever-growing resources available on the site. In 2020 the Portal team partnered with California Rare Book School to create Virtual Collections for two courses in support of teaching. While this project was initiated in lieu of in-person library visits during the global pandemic, the digital platform allowed all students to closely and simultaneously view the texts in real time during a discussion. An unforeseen benefit of the collaboration resulted from this consultation with outside expert faculty – some specific titles requested for inclusion in Virtual Collections for items not yet available on the Portal have prompted avenues of research on potential contributors, and further prioritization within the GRI's digitization program. It is hoped that in the coming years this service can be provided more widely for interested faculty in support of pedagogy.

The future of the Getty Research Portal involves a commitment to increased inclusivity, critical inquiry, and the development of new knowledge achieved through the collaborative model that has supported the platform's growth in its first 10 years. This ambitious endeavour will require new institutional partnerships, enhancements in metadata management, and systematic bibliographic work. In the quest for new knowledge creation, the Portal team is exploring innovative avenues utilizing digital art history methods. One potential project entails the utilization of text analysis tools on a selection of Portal texts to investigate how art has been defined historically and to critically examine the implications. A challenge of this project is that not all Portal texts are accompanied by optical character recognition (OCR) files or are stored in a repository that would allow them to be compiled. One possible avenue for this work would be to utilize Portal texts also available on HathiTrust and the use of HathiTrust Research Center tools. Another possibility is starting with a subset of GRI digitized texts, which are hosted by Internet Archive and include OCR files that would make text mining possible. Another line of analysis could utilize the Portal's data download feature to examine trends in metadata terms in individual Portal records, a method that could contribute to understanding how content is described and distributed.

From its beginning the Getty Research Portal has been acknowledged for its potential as an important tool for digital art history. In his comments marking the Portal's launch in 2012, James Cuno noted that the Portal is '…not just changing the way by which we do the history we have done but rather how we will do history differently because we will do so by having access to materials we have never had access to…'[22] Beyond a platform for discovery, the Portal can be a tool for critical analysis of the field by exposing both the strengths and gaps in available art historical literature. The Portal team is committed to continuing ongoing work to meet the shifting methodology of art historical research through its established collaborative model, and opening the door to new questions, new lines of inquiry, and ultimately new conclusions within art history.

www.ub.uni-heidelberg.de/Englisch/wir/projekt_getty_research_portal.html.

19. The DAH has been an important resource for identifying and prioritizing publications eligible for digitization at the GRI and in partner institutions: https://arthistorians.info

20. "Free and open: the Getty Research Portal – a doorway to international collaboration within art history," *Getty Magazine*, Summer 2018: 18–21, https://www.getty.edu/about/whatwedo/getty_magazine/gettymag_sum18.pdf.

21. In addition to the GRI's partnership with Tobunken, the team supporting the Portal has also begun harvesting records from Japan's National Diet Library (NDL). The NDL makes records for digitized books freely available as a downloadable file, which the Portal team is able to transform into a structure that the platform can ingest. Contributed records can be viewed at: https://portal.getty.edu/search?from=0&size=25&sort=relevance&grp_contributor=The%20National%20Diet%20Library,%20Japan. Strong holdings in Japanese language titles from the Metropolitan Museum of Art and Getty Research Institute have also been digitized and made available through the Portal.

22. James Cuno, "Opening remarks" (Getty Research Portal launch and colloquium, The Getty Center, May 31, 2012), https://www.youtube.com/watch?v=bPBbtniMA7I.

Megan Sallabedra
Digital Collection Development Librarian
Getty Research Institute
1200 Getty Center Drive
Los Angeles, CA 90049
USA
Email: msallabedra@getty.edu