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Accessing Russian culture online: The scope of digitization in museums across Russia

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Abstract

We compare the scope of museum digitization in the Russian Federation, a country with diverse cultural heritage and over 2,300 museums, with the scope of digitization in Europe as measured by the Enumerate Survey of 355 museums from twenty European countries initiated by the Collections Trust, UK, in 2011. Our article shows that the reach and scope of digitization in Russia is lesser than that of European museums. Digitization is mainly done in Russia for inventory purposes. The share of digitized objects published online is comparable to that in Europe if we consider images published on museum websites; however, much content from Russia is not licensed as reusable, partly due to the different legal framework that exists there. The article challenges the perceptions that global heritage collections are becoming more visible and accessible. It shows that future digital analysis of cultural heritage may be only possible with corpora of images provided by museums that publish numerous images from their digital collections online while pursuing the policies of free image reuse alongside open licensing. Such corpora may not be found beyond a limited number of Western collections, which may result in excluding many cultures from humanities research.

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1 Introduction

The rate and coverage of digitization throughout Europe and the Western world are monitored and understood (Navarette, 2014; Europeana, 2017;

Minerva EC, 2017). The reach and scope of digitization across Russia, a huge country with diverse heritage, is almost unknown. In this article, we build on previous work (Kizhner *et al.*, 2016a) by using Russian Ministry of Culture Statistics to calculate

Vance, 2010; Williams, 2010; Navarette, 2014). The synergy (or conflict) of keeping inventories and providing access continued in the late 1990s and early 2000s. An important initiative of providing access to Russian museum collections stems from 1997 when the State Hermitage Museum² and International Business Machines (IBM),³ a computational industry partner, launched an important collaboration programme. IBM provided a scanner—then a rare and expensive peripheral—and software, a web application, design, and user interface design for the museum website (Fig. 1), which was launched in 1999 (IBM, 2017). The State Hermitage Museum was unique in developing its digitization programme and publishing collections on its website, as the museum combined the advantages of having dedicated curators to provide metadata, ability to use high-quality digitization technology provided by a commercial company, and IBM technology to develop its website. The interaction of this major museum with large commercial companies was quite typical for a rise of digitization observed in many countries in the 1990s when museums benefited from large-scale applications of technologies and companies could experiment and build their reputation on the achievements (Terras, 2011).

The balance between keeping inventory databases and providing access to collections resulted in building the National Catalogue of the Russian Federation (RF) Museum Collections. Russian government policy related to the need of preserving collections from 1996 onwards (Federal Law number 54-FZ, 1996) was aimed at building the resource (Fig. 2), first as an offline catalogue for inventory purposes and later as a comprehensive open database posted online⁴ (Ministry of Culture of the Russian Federation, 2017b).

The catalogue is supposed to be completed by 2026 when metadata and images for all objects from the RF Museum Collections will be included in the registry and posted online (Ministry of Culture of the Russian Federation, 2017b). Uploading the data is mandatory for all public museums, and the planning/timeline is supposed to be controlled by the Ministry of Culture at the federal level for the most important museums (Ministry of Culture of the Russian Federation, 2017c), and at

the regional level for regional and local museums. The National Catalogue includes three registries. The offline registry of Russian public and corporate museums is maintained as a mandatory list, and private museums can be included on a voluntary basis. The second registry is an offline registry of museum objects for managing acquisition and accession, controlling location and movement. The third registry is the online database mentioned above (Fig. 2). It was developed for research in the humanities and for the general public. The guidelines available on the website of the National Catalogue inform museum professionals that the mandatory data to upload are an image, title (or object type), period, dimensions, accession numbers, classification field from a guideline, property type for a museum object (e.g. federal property), and credit line. This means that the collection management system will not allow the uploading of records without images (Ministry of Culture of the Russian Federation, 2017a). It is not yet a comprehensive database, as it only includes images for 9% of museum objects in the RF Museum Collections so far. This indicates that, to meet legislative requirements from the RF Ministry of Culture, a mass programme of digitization will need to happen across Russia. Consolidated museum activities may result in providing images and metadata to be published in the National Catalogue for the total number of museum objects by 2026, but the quality of images and metadata may suffer (Pravdina and Loshak, 2017).

Beyond the RF catalogue, we analysed the representation of Russian digital collections through international aggregators of content, but there were not vast amounts of Russian content available via these mechanisms, given the overall number of objects contained in these content management systems.⁵ In 2008–09, five Russian museums⁶ expressed their interest in contributing metadata of objects from their online collections to Europeana (Brakker, 2009). Between 2009 and 2011, these museums submitted metadata for 43,839 objects (Brakker and Kuibyshev, 2013). Metadata for more objects was added between 2011 and 2015, and their number was 48,689 at the time of writing this article (Europeana Collections, 2017). Google



Fig. 1 The interface developed in 1999 included the options of viewing collection highlights and browsing the State Hermitage Museum’s digital collection. The museum website with a new interface was launched in 2014. Courtesy of State Hermitage Museum

demonstrated preliminary results of a survey estimating the percentage of digital images for Russian museum collections. The study also included website exploration results on the percentage of museum collections posted online. However, we only asked 1.2% museums in the country for the percentage of digitized images and explored 6% of museums for the images posted online. The results gave initial estimates, indicating that the uptake of digitization for Russia is lower than that in Europe—18% of analogue collections compared to 31% for European museums (Nauta and van den Heuvel, 2015, p. 20), and that the percentage of images published online is low (1.5%) but comparable to that published in Europe (7%) (Nauta and van den Heuvel, 2015). We studied the scope of digitization across a diverse country with huge cultural and ethnic heritage. The limitation of our study was that being based on a small sample, we did not look at the quality of collections, importance of museum objects for humanities research, or the quality of digitized images.

The present article studies the uptake of digitization in Russian museums through the statistical reports (Form 8 nk) submitted to the Ministry of Culture from 2,367 museums in 2015.⁸ The annual statistical reports are mandatory for all museums reporting to local municipalities, regional administrations, and the RF Ministry of Culture, in fact for all non-private and non-corporate museums. From these, we can generate the average results for the country and the average results for its eight major geographical regions. This will show the distribution of digitization activities and content across Russia. We aim to contrast the data available with that from the Enumerate project, which is a study of the uptake of digitization across Europe between 2011 and 2015, funded by the European Union (Europeana, 2017), which will allow us to ascertain whether Russian digitization efforts are equivalent to those being undertaken elsewhere. We used the data from the Enumerate Survey of 2015 (Nauta and van den Heuvel, 2015), including 355 museums from 20 European countries.

We obtained the data of the RF museums' statistical reports for 2015 from the RF Ministry of Culture in summer 2016, after an enquiry submitted

via email by the Office of Provost, Siberian Federal University, to the RF Ministry of Culture. The complete data received as an aggregated spreadsheet for the filled Form 8 nk (RF Ministry of Culture Statistics, 2017) relate to 2,635 museums from every region of the RF.⁹ To the best of our knowledge, these data have not been previously used to study the scope of digitization, either at a regional or at a national level.

The data were received as an Excel spreadsheet. We redacted the spreadsheet removing information which did not relate to the digitization of museum objects or contained data on galleries that were for temporary display: these data cleaning resulted in 2,367 museums. The data in the spreadsheet were analysed to give the total number of objects for every museum, the number of database records with digital images, the number of images posted online, and the availability of English interfaces counted manually at a later stage (the data on English interfaces were not included in the spreadsheet). The table received included data for over 2,000 museums, and it was too large to be added to this article as an appendix, so we chose to present the results of the analysis.

4 Results

The percentage of digital images as related to the total number of museum objects across Russia was 14%. This is a low uptake compared to the average numbers for Europe, as the Survey Report on Digitization in Europe for 2015 shows 31% digital images as compared to analogue objects in museum collections (Nauta and van den Heuvel, 2015). The scope of digitization varied across geographical regions (Fig. 3, Table 1), declining relatively steeply in the Far East (the lowest scope), Volga Federal District, and Caucasus. The greatest level of museum digitization that exceeded the European level was observed in Saint Petersburg. The scale of digitization across major geographical regions varied between the minimum of 6% in the Far East and the maximum of 25% in the regions adjacent to Saint Petersburg (Fig. 3, Table 1). This means that online scholarly access and promoting



Fig. 3 The percentage of images in the digital collections (databases) of Russian museums as related to the number of analogue objects in a museum (the average value across Russia is 14%). This clearly shows a difference between the advanced regions in the north-west, with the scope of digitization almost reaching the European level of 31%, and the rest of the country

cultural heritage of Russian provinces is going to be more difficult even when (if) images are available online via the National Catalogue (the museum objects necessary to study the cultural heritage of the country have not been digitized).

The Survey Report on Digitization in Europe (ibid.) demonstrates the perceptions of museum staff regarding the necessity to digitize museum objects. Curators think that 86% of museum collections have to be digitized. This means that historical and cultural information has been digitally reproduced for a third of European museum collections, for the same number of collections in Saint Petersburg and for a much smaller number of collections in Siberia, the Russian Far East, and Volga

District where ethnographic and historical museum repositories obviously represent a great interest.

An interesting and unexpected result was the difference between the scale of digitization in two major cities, Moscow and Saint Petersburg. The percentage of analogue objects with digital images was much higher in Saint Petersburg than the average across Russia and much higher than that in Moscow. A possible explanation of the IBM/Hermitage project started in 1997 (see above) triggering digitization activity in the museum community in Saint Petersburg may be a partial explanation. In addition, a strong uptake of digitization in this region relates to the interaction of the museum community in Saint Petersburg and the Russian

Table 1 The percentage of the analogue collections digitally reproduced and available online in the museums of Saint Petersburg, Moscow, and across Russia

| Places | The percentage of the analogue collections digitally reproduced as related to the total number of objects, % | The percentage of digital images posted online as related to the total number of analogue objects, % |
|---|--|--|
| The average across Russia | 14 | 1.44 |
| Saint Petersburg | 36 | 0.93 |
| Northwest (Northwestern Federal District) | 25 | 1.32 |
| Ural Federal District | 18 | 3.2 |
| Southern Federal District | 16 | 1.3 |
| Centre (Central Federal District) | 11 | 1.77 |
| Siberian Federal District | 11 | 0.79 |
| Moscow | 10 | 1.28 |
| Caucasus (North Caucasian Federal District) | 9 | 1.16 |
| Volga Federal District | 8 | 1.18 |
| Far Eastern Federal District | 6 | 0.93 |

Academy of Sciences in the 1970s, followed by collaboration with national and international commercial companies, including IBM, at a major scale, followed by KAMIS: Museum Collections (see above) working in the region.

We can see that digital collections do exist across the country, but their scope varies, and the level of digitization beyond the Northwestern Federal District is much lower compared to the average European level of digitization.

It is especially important to understand a combination of digitally reproduced images and the scope of images posted online (Fig. 4, Table 1). For example, Saint Petersburg with the record level of digitization at 36% makes only 0.93% of the city's analogue collections published online and visible (Fig. 4, Table 1). The Ural Federal District with the level of digitization at 18%, the second highest in the country, provides digital access to 3.2% of its analogue collections. Cultural heritage in this part of the country is the most accessible to online users, while museum collections in Siberian Federal District are least accessible (Fig. 4, Table 1). The effect of invisibility of Siberian museum collections may result in an inadequate impression regarding Siberian cultural heritage. A question 'Do Siberian museums exist as data for the researchers in the humanities' may indeed be asked in this context.

We can see that digital collections of Russian museums mostly exist for inventory purposes. Visibility of Russian digital collections, consequent access to images for scholarly studies, and introduction of Russian cultural heritage to the international cultural discourse depend on the combination of digitally reproduced images and images published online. With numerous international cultural collections available online, a major part of Russia's cultural heritage may be at risk of staying inaccessible for public use and scholarly analysis at national and international levels.

We analysed whether the information on Russian digital collections is provided in English.¹⁰ We compare Moscow, Saint Petersburg, and adjacent regions with provinces demonstrating that digital collections for museums in Siberia, Far East, and the Caucasus are least accessible to international online users. As shown in Table 2, museums in Moscow, Saint Petersburg, and adjacent regions in Northwestern Federal District indeed provide English interfaces. Almost a half of museums in Moscow provide English interfaces, but only a half of them (sixteen museums of twenty-eight) provide several images of museum objects linked to an English interface. Fifteen museums across Russia (0.63% of the total museum number) provide metadata in English. In Moscow, metadata in English is present on the websites of the Pushkin State



Fig. 4 The percentage of digital images posted online as related to the total number of analogue objects. The lowest percentage is observed in Siberia, Far East, and Saint Petersburg. Images of analogue museum objects are under-represented online even in the case they have been digitized. This shows that digitization is mainly conducted for inventory purposes.

Museum of Fine Arts,¹¹ the State Tretyakov Gallery,¹² the Polytechnic Museum,¹³ and Moscow Kremlin Museums.¹⁴ A similar situation of attracting physical visitors and obvious difficulties in accessing online collections is a characteristic of museums in Saint Petersburg. While twenty-five museums in Saint Petersburg provide English interfaces, only three major museums (the Hermitage Museum, Museum of the History of Saint Petersburg, and the State Russian Museum) present metadata in English so that they can be retrieved as separate museum objects by non-Russian speaking users.

Russian museums understand digitization of their collections as the necessary tool of maintaining museum registries for inventory purposes. This is

demonstrated by a dramatic difference between the percentage of digitally reproduced images and images posted online, especially in an advanced region of Saint Petersburg and the Northwestern Federal District.

5 Closed Collections

‘Permissions culture’ (Bielstein, 2006; Whalen, 2009; Petri, 2014; Aufderheide *et al.*, 2016) is a situation when the society expects users to ask for permissions or licences when interacting with visual art in a digital environment. The degree of freedom for this interaction varies in different countries (for example, Aufderheide *et al.*, 2016 discussing

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museum objects requiring conservation, the number of objects cleaned, repaired, and stabilized in the reported year, the number of museums with electronic inventories, the number of museums with the Internet access, etc.

- 10 English has been long considered a global language (Crystal, 1997) or 'today's dominant language of science' (Ammon, 2001, p. v). There is some evidence supporting the claim that search engines favour pages in English giving them a priority in rankings (Al-Eroud *et al.*, 2011).
- 11 <http://www.arts-museum.ru/?lang=en>
- 12 <https://www.tretyakovgallery.ru/en/>
- 13 <https://polymus.ru/eng/>
- 14 <http://www.kreml.ru/en-US/museums-moscow-kremlin/>
- 15 Federal Law number 54-F3, 26 May 1996 on Museums and Museum Collections in the RF, amended in 1996, 2003, 2004, 2008, 2010, 2011, 2014, and 2016. Article Number 36 states that copying museum products is impossible without a written permission from

museum administration. The second law regulating, in particular, image reuse is 'Basic Legislation of the RF on Culture' number 3612-1, 9 October 1992, amended in 2017. Article Number 53 states that companies and public institutions can use the images of cultural heritage objects only with the permission of an object owner. Because the owner is either the RF or a region within the RF in the case of public museums, the owners' rights are looked after by either federal or regional Ministries of Culture (Federal Law number 54-F3, 26 May 1996, Article Number 4).

- 16 <https://openglam.org>
- 17 Of course, major British and US galleries, libraries, archives, and museums do not provide interfaces in languages other than English. See, for example, the website of the Metropolitan Museum <https://www.metmuseum.org> or Tate Britain <http://www.tate.org.uk/visit/tate-britain>
- 18 Federal Law number 54-F3, 26 May 1996 on Museums and Museum Collections in the RF, amended in 1996, 2003, 2004, 2008, 2010, 2011, 2014, and 2016.