CREATE
Creative Amsterdam: An E-Humanities Perspective

Amsterdam Centre for Cultural Heritage and Identity

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Summary

Humanities scholars over the past centuries have generated a wealth of knowledge on culture, identity, and history. The present trend towards digitization, however, threatens to create a gap between these traditional experts and the avant-garde of new, data-driven research in the humanities: if we do not act now, before the experts retire within the next few years, an invaluable body of knowledge will be lost. The Cultural Heritage and Identity priority area aims to bridge the gap by training a new generation of scholars in a research project that connects highly talented junior researchers with experts in culture, identity, and history and with specialists in information technology. Combining existing knowledge and datasets on cultural heritage with new computational tools for analysis and visualization, this project creates a state of the art infrastructure for the next generation of digitally equipped humanities scholars.

Cultural heritage plays a crucial role in processes of identification on individual and collective levels. Heritage is our ‘cultural DNA’: material forms of heritage (buildings, artworks) and immaterial ones (ideas, values) are essential building blocks for local, national, and transnational identities. The Cultural Heritage and Identity priority area has an excellent record of top-level research explaining the impact of heritage on identities in The Netherlands and Europe. Building upon this scholarship, we envisage a new project analyzing the role of culture in the formation of Creative Cities.

A city’s cultural industries are a major factor in its economic durability and the wellbeing of its inhabitants. Successful urban agglomerations are marked by the concentration of artists, performers, and knowledge workers; cultural production contributes to a city’s overall capacity for innovation and competition. Scholars in the humanities and social sciences have begun to explore this dynamic. Thus far, however, they have struggled to explain the correlation between the micro level of cultural interaction and the macro level of a Creative City’s economic and social success. Many factors complicate any urban setting’s spatial and historical fabric. Where are the creative entrepreneurs located? How do they communicate, interact, collaborate, and compete? And how do they turn the city into a magnet for other innovators?

New analytical technologies make it possible to address this complexity in an integrated manner. Using data on the various cultural sectors of Amsterdam collected by humanities scholars, CREATE will use large-scale digital techniques to investigate how cultural industries have shaped Amsterdam’s unique position in a European and global context, from the 17th century until the present day. Such a project will not only explain the success of Creative Cities but also yield valorization opportunities regarding policy, education, and entertainment. CREATE will integrate UvA’s existing top-level historical and computational research. The additional financing will facilitate a central infrastructure for combining, analyzing, and visualizing existing datasets in a network that exposes their relations and interdependencies. This will provide unprecedented means to investigate the role of cultural industries in the emergence, development, and success of Amsterdam as a Creative City. As such, the project breaks the ground for future research on European urban conglomerations.

CREATE will strengthen UvA’s pioneer position as a center for innovation in Heritage Studies and Digital Humanities. It is our ambition to become world-leading in the historical and analytical study of Creative Cities. The additional financing will make it possible to build the technical infrastructure for ground-breaking scholarship in this field and to establish the ideal training ground for the next generation of digital humanities scholars.
CREATE is based in the newly established Digital Heritage Lab of the priority area Cultural Heritage and Identity: a space for collaboration between scholars, heritage institutions, and private partners. The laboratory, currently constructed with the digitization company Picturae and comprising the work of the Centre for Digital Humanities (CDH, which coordinates a total of 14 public-private projects), provides an infrastructure for state-of-the-art research and education based on digital heritage collections. The additional financing will allow us to upgrade this lab into a fully-fledged e-Humanities facility that will eventually acquire a permanent position at the heart of FGW’s inner-city campus.

In order to meet the challenges posed by synthesizing and analyzing humanities data, the project’s principal investigators will collaborate closely with Prof. M. de Rijke’s Information and Language Processing Systems group (part of the Intelligent Systems Lab Amsterdam at the Informatics Institute, FNWI) and the Center for Creation, Content and Technology (CCCT). With its ambition to integrate computational analysis, visualization, and modeling of heterogeneous cultural data, CREATE will help to catalyze the projected pan-Amsterdam Center for Humanities and Technology (CHAT) that is being set up by, amongst others, professors Bod and De Rijke (also involving the KNAW, VU University, and the Netherlands eScience Center).

The Faculty of Humanities has made digital heritage one of its research focus areas and recently established new Chairs in Heritage and Digital Culture and in Computational and Digital Humanities, as well as part-time Chairs (with Huigens ING) in Computational Literary Studies and Digital Methods for Historical Research. What makes CREATE stand out from existing projects elsewhere is its ambition to combine historical research with an analytical approach based on e-Humanities technology. The requested funding, matched by the Faculty, will therefore be used to establish an additional Chair in Historical Data Collections that ensures a structural bridging of the gap between these two approaches.

**Computational Analysis and Visualization of Historical Data**

**Prof. dr. L.W.M. Bod** is director of the Center for Digital Humanities, VICI-laureate and leading specialist in computational and digital humanities, with an outstanding track record in acquiring research funding (10M€ between 2003-2013).

**The Cultural Industry of Amsterdam in the Golden Age**

**Prof. dr. E.M.P. van Gemert** is director of the Amsterdam Centre for the Study of the Golden Age, the world-leading research centre on art, culture, and history of the Dutch Republic between 1550 and 1750, and an internationally recognized expert on the dynamic role of literature and literary life in Early Modern societies.

**Europe’s Cultural Industries in the ‘Long 19th Century’**

**Prof. dr. J.T. Leerssen**, Spinoza-laureate and Academy Professor, leads the Study Platform for Interlocking Nationalisms (SPIN) that charts the cultural and historical root system of European nationalisms in the ‘long 19th century’ (1770-1914).

**Amsterdam’s Creative Industries in the 20th and 21st Centuries**

**Prof. dr. J.J. Noordegraaf**, Professor of Heritage and Digital Culture and director of the Cultural Heritage and Identity research priority area, is a former NIAS fellow and an internationally recognized expert on audiovisual and digital heritage.

**Data Retrieval in the Cultural Heritage Domain**

**Dr. ir. J. Kamps** is a VIDI-laureate and internationally recognized expert in Information Retrieval. He has been extremely successful in acquiring funding from NWO and the EU 7th Framework Program (over 3M€ between 2007-2013).
Scientific case

Over the past three years, researchers of the Cultural Heritage and Identity priority area have used computational tools to great success. The Centre for the Study of the Golden Age mapped the results of the NWO program ‘Economic and Artistic Competition in the Amsterdam Art Market (ECARTICO)’ onto a digital map of 17th-century Amsterdam (Digital Canal Ring). The European Study Platform for Interlocking Nationalisms (chaired by PI Leerssen) has created visualizations of the dynamic of scholarly exchange in the long 19th century (SpinTime). NIAS provided additional funding for further testing Dr. P. Lulof’s facility for 3D modeling, directed at analyzing transformations in the built urban environment.

Now, with the support of the additional funding, we want to combine these efforts in order to answer the broader question: How do the interactions among creative workers contribute to the making of a Creative City? Integrating the existing approaches and datasets, CREATE will generate an unprecedented resource for the analysis of the cultural industries that have shaped Amsterdam as a Creative City from the 17th century until today. The research collaboration and infrastructure will yield new methods for data visualization that reveal relations and dependencies and thus qualify the types of interaction between creative workers. The computational analysis of combined datasets will chart how networks of communication, collaboration, and competition develop in space and over time.

Data-visualization via network analysis is a well-known tool in Digital Humanities, but applying this to a combination of different genres (art, literature, music, and archival documents) is a non-trivial task. Only then can we discern underlying relations between the various actors in historical cultural industries. In this sense the project will not only break new ground in understanding the making of Creative Cities but also catalyze new methods and tools for Digital Humanities.

The project focuses on the following five research areas:
1. The cultural industry of Amsterdam in the Golden Age
2. Europe’s cultural industries in the ‘long’ 19th century
3. Amsterdam’s creative industries in the 20th and 21st centuries
4. Computational analysis and visualization of historical data
5. Data retrieval and analysis in the cultural heritage domain

For each of these areas, the Faculty of Humanities boasts a wealth of expertise and existing results, embedded in leading international networks. At UvA large historical datasets have been developed on Amsterdam’s building history, art market, publishing and theatre scenes, cinema industry and other creative industry sectors. Other academic institutes in the network of the Cultural Heritage and Identity priority area, including the KNAW institutes, hold extensive digital collections regarding language, literature, music, radio, and television. CREATE will lay the groundwork for a future integrated analysis of all different media. This ground-breaking comprehensive approach will respond to our research question: how has culture contributed to the making of Amsterdam as a center of innovation and competition? Ultimately, the project will provide a model for similar research about other European cities that are historically connected to Amsterdam (London, Paris, Rome, Antwerp).

The following steps will be taken to achieve our goals:
1. Merge the relevant datasets for the four periods and develop the tools for synchronizing them;
2. Develop text analysis tools for harmonizing instable orthographies in collaboration with the ILLC’s Language and Computation group. These will be combined with the advanced search engines for historical information retrieval and visualization developed within the ILPS group;
3. Perform network analysis (with tools such as ManyEyes) and use visualization tools (such as Gephi) to map the different flows of exchange, in space and over time, and adjust the relevant methods and tools;
4. Create an online research platform for adding data and accessing the different visualizations;
5. Collaborate with heritage institutions and private partners in developing applications that make the results available for the purposes of education and entertainment.
### Talent case

The proposed project allows the excellent researchers in the Cultural Heritage and Identity priority area to join forces with leading scholars in Digital Humanities, Creative Industries and Information Technology within UvA and beyond. As such it is at the forefront of innovation in the humanities, combining the strength of Amsterdam’s historical heritage and creative industries and UvA’s leading position in Heritage Studies and Digital Humanities.

The additional financing will allow us to develop the Digital Heritage Lab as a place where innovative research goes hand in hand with the development of new applications. It will act as a magnet for top-talented junior scholars seeking training in state of the art Digital Humanities research. Furthermore, our own students will be encouraged to engage in avant-garde research on Digital Heritage, thus realizing UvA’s ideal of research-based education.

The city of Amsterdam is the cultural capital of the Netherlands and currently has the largest concentration of creative industries. Zef Hemel (Wibaut Chair for Urbanism) even compared ‘Greater Amsterdam’ to the San Francisco Bay area. The Cultural Heritage and Identity program has a strong track record of collaboration with heritage partners (Rijksmuseum, Stedelijk Museum, Stadsarchief, Amsterdam Museum, Allard Pierson Museum) and commercial partners (Picturae, Webmapper, Elephant Candy, VicarVision, Submarine and Mediamatic) in the larger Amsterdam area. CREATE will further catalyze these collaborations because its results are highly attractive for creative reuse (as demonstrated by the Digital Canal Ring).

### Innovation case

CREATE will provide a ground-breaking integrated analysis of a city’s entire cultural production over four centuries in its spatial, historical, and structural dimensions. The new technology will allow both panoptical views of the urban cultural fabric and zooming in on specific clusters, locations, and collaboration, laying bare how synergy between specific creative workers on the micro-level impacted their cultural production. This allows us to respond to the central question of how the interactions among creative workers contribute to the making of a Creative City. Combining the priority area’s time-honored stature in historical research with the new analytical tools offered by digital humanities, it will generate entirely new insights that will complement the socio-economic analysis of Dutch cities undertaken in the Urban Studies priority area, thus opening up new avenues for future synergy between different UvA faculties.

The integrated historical and computational infrastructure will provide an ideal setting for future collaboration with pertinent ongoing projects in the Faculty of Social and Behavioural Sciences and elsewhere. The project’s social relevance lies in its ability to illuminate the role of cultural industries in shaping a city’s economic durability and the wellbeing of its inhabitants. The specific nature of Amsterdam, an ideal case for studying great complexity in a manageable dataset, gives CREATE the potential of breaking the ground for future research directed at European urban conglomerations.

### Valorization case

The Digital Heritage Lab and the Centre for Digital Humanities collaborate with private partners to jointly develop products that emerge from humanities research. Examples of successful collaboration include the development of the Digital Canal ring (with Webmapper), the Huygens app (with 7scenes), and the evaluation and redesign of a crowdsourcing platform for the cultural heritage field (with Picturae). CREATE provides many opportunities to use the rich historical data in new applications for education and entertainment, using our wide network in the heritage sector and creative industries. Our contacts at the Amsterdam Economic Board (Marleen Stikker, Maarten de Rijke) and CLICK-NL (Jaap Kamps, Jan Simons, Hans Bennis, Johan Oomen) will provide a platform for realizing such forms of creative reuse.

Besides, the results are highly relevant to researchers and policy makers. CREATE will generate invaluable insights regarding those cultural factors that determine the success of creative cities. Mapping the networks of creative knowledge workers and their evolution will allow us to determine the role of the cultural industries in the economic success of Amsterdam and to study the dynamic interactions with other European cities, from the past through the present to the future.

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**Starters in the Creative Industries in Amsterdam, 2005. Source: O+S**