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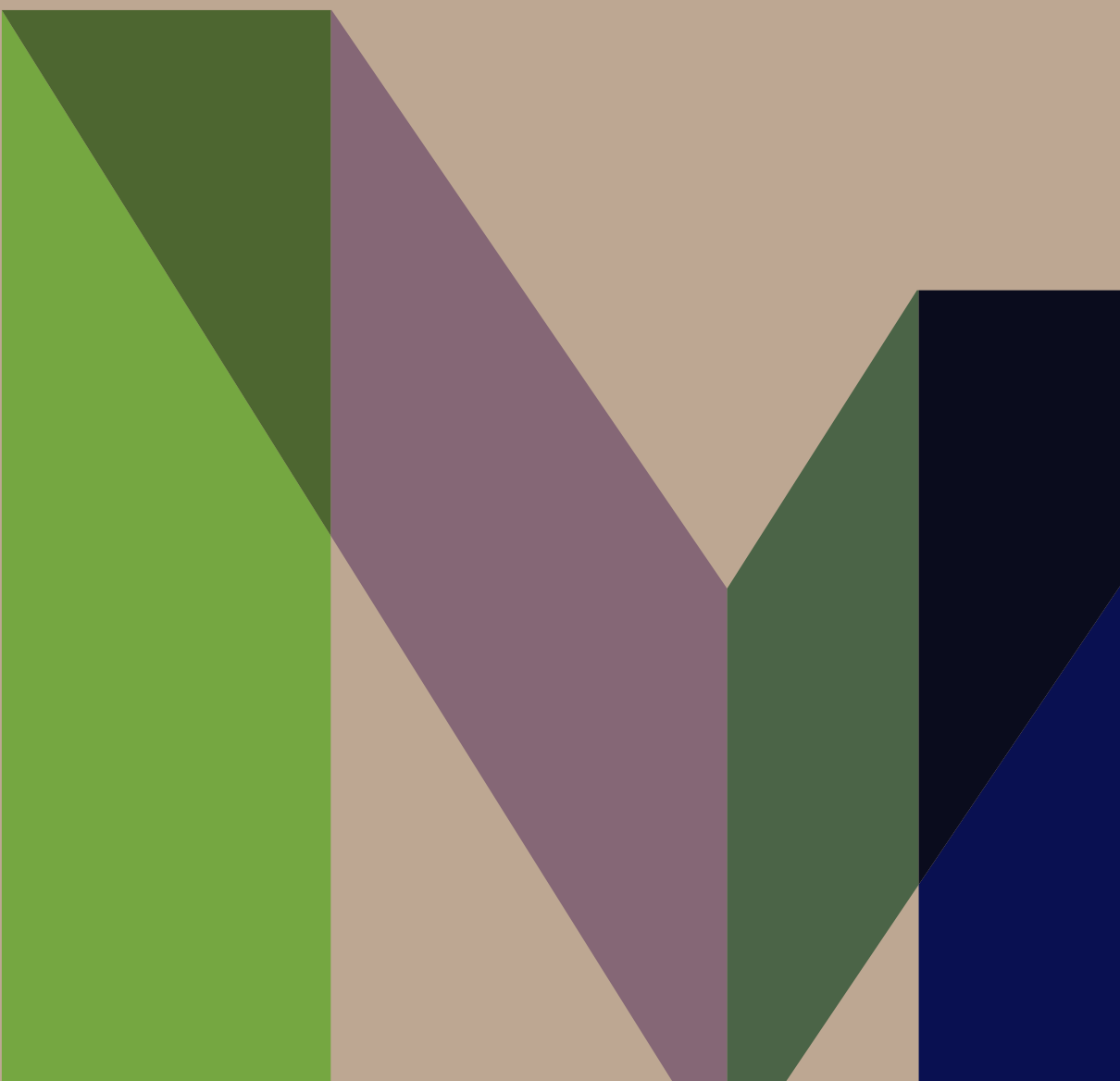
International Journal
for Digital and Public Humanities

e-ISSN 2724-3923

Vol. 3 – Num. 2
December 2022



Edizioni
Ca' Foscari



e-ISSN 2724-3923

magazén

International Journal for Digital and Public Humanities

Editor-in-Chief
Franz Fischer

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Edizioni Ca' Foscari - Venice University Press
Fondazione Università Ca' Foscari
Dorsoduro 3246, 30123 Venezia
URL <https://edizionicafoscari.unive.it/en/edizioni/riviste/magazen/>

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International Journal for Digital and Public Humanities

Semestral Journal

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Publisher Edizioni Ca' Foscari | Fondazione Università Ca' Foscari | Dorsoduro 3246, 30123 Venezia, Italia | ecf@unive.it

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Scientific certification of the works published by Edizioni Ca' Foscari: all essays published in this issue have received a favourable opinion by subject-matter experts, through an anonymous peer review process under the responsibility of the Advisory Board of the journal. The evaluations were conducted in adherence to the scientific and editorial criteria established by Edizioni Ca' Foscari.



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Modern Art from the Arab Region – Digitisation as a Chance?

The Research and Database Project LAWHA as a Case Study

Monique Bellan

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Abstract Reconstructing history is a challenging task. What does it mean exactly and how to proceed? What are the advantages of the digital approach to history? How can we differentiate between digital art history and art history with digitised material? The present paper aims to provide insights into the ongoing research project LAWHA (*Lebanon's Art World at Home and Abroad: Trajectories of Artists and Artworks In/from Lebanon Since 1943*) and the knowledge structure of its database. How does the data need to be modelled to provide answers to the guiding research questions? The project departs from the presumption that the digital can create more visibility for modern art from the Arab region and ultimately broaden the art canon. Is that too positivist an approach and can the digital really be the spearhead of real-life developments? What role do keywords play in that regard?

Keywords Controlled vocabularies. Digital art history. Modern art. Lebanon. Database. Ontology. Semantic web. Knowledge organisation.

Summary 1 Introduction. – 2 Revisiting the Canon of Modern Art. – 3 Emancipation Through Digitisation? – 4 Knowledge Organisation in the Semantic Web. – 5 Keywords as Entry Points to Knowledge. – 6 How to Capture Context? – 7 Conclusions.



Edizioni
Ca'Foscari

Peer review

Submitted 2022-05-27
Accepted 2022-10-24
Published 2022-12-16

Open access

© 2022 Bellan | 4.0



Citation Bellan, M. (2022). "Modern Art from the Arab Region – Digitisation as a Chance? The Research and Database Project LAWHA as a Case Study". *magazén*, 3(2), 235-260.

DOI 10.30687/mag/2724-3923/2022/06/004

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1 Introduction

Database projects and open data are the order of the day. Numerous initiatives around the world are working on securing cultural heritage and making it accessible to the public.¹ This is important insofar as they may – in the future – allow for a greater depth of understanding, or reveal hidden facets, or alternative representations of history, in this case art history. In the course of massive digitisation efforts over the last two decades, a significant change has taken place in that collection holdings have now become more transparent and can be accessed remotely, even if not always openly so (e.g. due to copyright restrictions). This makes scholarly work much easier, at least when it comes to obtaining a first impression of the material. However, the digital should not, and cannot, replace the original. The added value lies rather in their complementary aspect.

In Lebanon, and the Arab region more broadly, publicly accessible archives are rare, and documents are often scattered throughout various institutions and difficult to obtain. Therefore, such initiatives make an important contribution to protecting cultural heritage from being forgotten or even destroyed. The impending loss of information on artworks, artistic practices, and artists from the pre-digital era is becoming ever clearer, making it all the more urgent to collect and process the historical evidence that is still available. In Lebanon, for example, numerous archives and sometimes artistic works have been lost or destroyed over the last fifty years as a result of armed conflicts, catastrophes (such as the Beirut port explosion in August 2020), or carelessness (a few legacies have simply ended up being thrown away). These irreparable losses lead to numerous gaps in the reappraisal of Lebanon's history of art and the reconstruction of its networks. Against this backdrop, initiatives that strive to track down and secure the remaining material seem all the more imperative. Digitising and storing surrogates of artworks and archival material in digital repositories ensures greater security and accessibility. Nevertheless, it can only encapsulate the information, not its materiality.

LAWHA – *Lebanon's Art World at Home and Abroad: Trajectories of Artists and Artworks in/from Lebanon since 1943*² is not an archival project in the sense that it provides a physical space for documents. Rather, LAWHA is a research project and database that will

1 Open access is often a goal of the initiatives but cannot always be achieved due to legal and ethical restrictions.

2 This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No. 850760) and is hosted by the Orient-Institut Beirut/Max Weber Foundation. For further information see: <https://lawha.hypotheses.org>. The Author of this article works as a researcher in the project.

host a digital collection. Although the terms ‘archive’ and ‘digital collection’ are often used interchangeably, there are fundamental ontological differences between them. As Diego Mantoan points out, one important characteristic of an archive in the traditional sense is that it forms a closed circuit (2021, 160). Knowledge is established around one person or one institution. Despite being open for potential additions, it will always be centred on one collection and never strive to connect to anything outside itself. The archive’s main purpose is therefore to collect, categorise, and preserve information without any curatorial intervention using the “principles of provenance, original order, and collective control”³ (Theimer 2012). Archives and databases have become interchangeable conceptual entities that are considered a “selected, ordered searchable grouping of materials that are made accessible for research purposes” (Mantoan 2021, 160). A database, however, is generally subject to specific research agendas and the information tailored to serve this purpose. One of its aims is to connect sources often stored in different collections and to enhance them by juxtaposing secondary sources for contextualisation purposes.

It can be a varied ensemble of collections and physically dispersed items gathered together solely in the digital realm. (Mantoan 2021, 160)

Kate Theimer (2012) therefore suggests that online collections be referred to as digital collections rather than archives. It is evident that digital repositories which combine primary and secondary sources with thematic cross references have their advantages. However, these digital collections often pay little attention to original contexts such as the position and proximity of documents to other physical objects within the collection, something which is preserved in most archival practices.⁴ The original context is often dissolved to fit into new contexts that help underpin specific research questions. The “contextual mass” (Mantoan 2021, 161) or the possibility of combining different items (e.g. digital reproductions of artworks, publica-

3 The American Society’s full definition of an archive is as follows: “Materials created or received by a person, family, or organization, public or private, in the conduct of their affairs and preserved because of the enduring value contained in the information they contain or as evidence of the functions and responsibilities of their creator, especially those materials maintained using the principles of provenance, original order, and collective control” (Theimer 2012).

4 “Most digitisation projects frequently turned into a sort of ‘augmented collection’, intermixing materials of different origins, whereby digitised primary sources often lost track of their physical context and its related meaning, such as their position or arrangement in boxes, folders, parent collections or donations” (Mantoan 2021, 161).

tions, correspondence, diary entries), subjects, and ideas with each other when retrieving information is important to LAWHA, as the project aspires to make connections and add facets to the larger picture. It also aims at providing information on the original context of each archival document in the metadata (e.g. part of which collection, part of which folder). However, given the limited duration of the project (2020-25) and the priorities it needs to define, the aim is not to replicate the original archival collection. LAWHA's database will not only provide digital surrogates of selected artworks and archival documents (i.e. price lists, correspondence, invitation cards, notes, photographs, diaries) but also comprehensive information on actors, organisations, publications, exhibitions, and artworks including audio and video interviews. The Omeka S open-source software supports the project's ambitions to organise and connect digital cultural heritage collections with other resources online. The project's database and digital platform (DDP) is intended as a tool to facilitate linking context and artistic creation, as well as serving as a model that can be used by similar projects in the future. LAWHA aims to make knowledge accessible by gathering and locating resources, tracing patterns and networks, as well as by making data visible. At the same time, it seeks to generate new questions and insights.

This is where digital art history comes into play. Digital art history can be described as the process of creating knowledge using new methods. It does not aim to replicate existing knowledge, but rather to generate new knowledge with the help of digital tools. This data-driven art history implies the visualisation of data, i.e. in knowledge graphs. In doing so, new knowledge can be generated which would have been difficult to access with analog methods. Knowledge graphs are semantic networks that represent objects, events, people, concepts, etc. They visualise the relationships between these entities and can be helpful tools, especially when dealing with large datasets. Nonetheless, it can only be a tool and not a means in itself. Data without any further processing, i.e. contextualisation and interpretation, is useless data. Eef Masson points out that the aim of creating meaning with data is, however, not necessarily a commonly shared one:

Other critics react instead to the claim that digital scholars do not actually *need* to do this: that it is enough that they discover patterns [...] as these already 'show us what we would never have been aware of' without our digital tools. (Masson 2017, 32; emphasis in the original)

The visualisation of relationships is certainly an important advantage of digital tools as they allow us a bird's-eye view on certain aspects of the world, which makes patterns more easily discernable than was previously possible with analog methods. It also allows us

to visualise the centrality of persons (e.g. artists, gallerists, art critics) within a group for example, or the importance of certain institutions, artworks, or periods. However, importance or centrality is the sole result of quantifiable data, it does not provide us with any information on the quality of relationships. In addition, network graphs, although they do not contain a narrative as such, have the “potential of ‘possessing narrativity’” (Venturini et al. 2017, 157). Narrative meaning can be derived from “visual properties such as topology, density of connections, absence of connections, size, position and colour nodes” (Venturini et al. 2017, 167). The authors convincingly argue that not only do computational and formal analytical possibilities need to be developed, but also narrative ones for networks to become more powerful knowledge instruments (168).

There is another important point, however, that may cause some reluctance vis-à-vis the graphical representation of knowledge. Eef Masson referring to Johanna Drucker points out that

rendering information in graphical form [...] ‘gives it a legibility that hides every aspect of the original interpretative framework on which the [...] data were constructed’. [...] Therefore, we are well advised to think of them not as *data* (given) but rather as *capta* (taken), ‘constructed as an interpretation of the phenomenal world’ rather than inherent to it. (Masson 2017, 32; emphasis in the original)

The lack of depth in most visual representations gives the impression of clear data that has not been subject to doubt or interpretation. Therefore, digital research requires reflection on the status of one’s data, the methods and tools, and the interpretations. (Masson 2017, 33) This should be made as transparent as possible. These preliminary thoughts are essential for LAWHA and for any digital (art) history project as they acknowledge the potential of digital tools, and at the same time highlight the importance of constantly connecting any digital representation to its original context and of questioning its validity.

In the following paragraph, the project will be outlined and contextualised within the research on modern art outside of Europe and North America.

2 Revisiting the Canon of Modern Art

For non-European modern art - here in particular from Lebanon and the Arab region - there is an imbalance in representation both in the analog and the digital area. Art historical knowledge about this region is mostly limited to Islamic art. In recent years, however, re-

search has increasingly been extended to include modern art.⁵ This gap is partly due to an attitude prevalent for a long time which has generally considered modern art from non-European contexts as “be-lated” or “missing”. From this perspective, artworks have been reduced to mere copies of European or Western originals and have thus not been worth considering. This superficial and singular view of other modernist expressions has begun to change over the past years, however. More and more initiatives are attempting to decentre arts and culture, and knowledge more broadly. This manifests itself in a remodelling of university curricula as well as curatorial and scholarly practices. It implies a comprehensive, much overdue revision of institutionalised and deeply rooted perspectives on non-Western art that need to be deconstructed and recontextualised in favour of a more inclusive artistic canon and art history (Bellan, Drost 2021, 17).

On the other hand, art historical evidence has, not least due to a lack of capacity and infrastructure (and possibly also a deficiency of self-esteem with regard to their own modern artistic heritage) in the region itself, so far not been systematically processed or recorded. Scholarly writings on modern Arab art which endeavour to reconstruct local art histories have therefore only recently gained momentum. In parallel, several initiatives⁶ have emerged whose aim it is to secure and preserve archival material and make knowledge (digitally and sometimes also analogously) accessible. All these efforts have helped to raise awareness about the rich artistic heritage that needs to be preserved and processed. They may in the future provide answers to many art historical questions and reveal connections that have fallen into oblivion. The potential for expanding the art canon in the future is laid out in the archives. Not only can local and regional canons be expanded, but connections and exchange relationships between artists, institutions, art critics, and ideas can be displayed on a global level.

This concept is a core concern of the LAWHA research project. The project examines the trajectories of visual artists and artworks in and from Lebanon since the country’s independence from France in 1943, and in doing so revisits prevalent narratives and sheds light on hith-

⁵ See for example: ARVIMM – Groupe de recherches sur les Arts Visuels du Maghreb et du Moyen-Orient, 19^e-21^e siècle (<https://arvimm.hypotheses.org>); Institut des Cultures d’Islam (<https://www.institut-cultures-islam.org>); Institut du Monde Arabe (<https://www.imarabe.org/fr>); Mathqaf (<https://mathqaf.com>); Mathaf (<https://mathaf.org.qa/en/>); Ca’ Foscari University of Venice’s new master’s degree programme: Contemporary Art in the Arab World, Iran and Turkey (<https://www.cafoscari.challengeschool.it/en/master/contemporary-art-in-the-arab-world-iran-and-turkey/>), etc.

⁶ Some of the local and regional initiatives are MACAM (Modern and Contemporary Art Museum) in Alita/Northern Lebanon and AlMawrid at NYU Abu Dhabi, amongst others.

erto largely neglected art historical developments, such as those during the Lebanese civil war (1975-90). The focus is on visual artists who exhibited in Lebanon (and abroad) before and during the war. This will eventually extend to the present. Part of this diverse group, both in terms of media (e.g. painting, collage, print, sculpture, installation, tapestry) and cultural and art historical backgrounds, are artists such as Shafic Abboud, Paul Guiragossian, Alfons Philipps, Thea Porter, Etel Adnan, Dhia al-Azzawi, Saloua Raouda Choucair, Fateh al-Moudarres, Juliana Seraphim, and Mohammad Rawas, among many others. LAWHA is also interested in art critics, gallerists, collectors, and other actors in the field as they represent an essential part of the network. The research is organised around three main clusters: artistic education, exhibitions, and the art market.

The specificity of Lebanon's history means it is particularly worthwhile to study the power relations between artists and institutions. Lebanon is regularly portrayed as a country with weak public institutions but a vibrant cultural sector. Lebanon has enjoyed a high level of cultural production as well as a high degree of circulation and mobility both to and from the country, with Beirut becoming the cultural capital of the Arab region in the late 1950s.⁷ At the same time, Lebanon is defined by its experience of conflict and war. The project aims to explore and evaluate these factors and multiple layers that shape the history of art in Lebanon by reconstructing individual trajectories, contacts, and exchanges of artists and artworks based on archival documents and oral history.

LAWHA approaches the research subject from multiple perspectives: on the one hand, it examines local factors that have shaped the artistic field, such as the emergence of a middle class with an interest in art and the financial means to purchase artworks. It also looks at the emergence of art galleries and art criticism that both acted as patrons of emerging artists and styles. Regional factors also played an important role, such as the migration of artists and writers from neighbouring Arab countries to Beirut and the consecutive development of the city into an artistic and intellectual centre of the region, as mentioned above. Finally, global factors, such as Cold War cultural diplomacy, and organisations, such as the Congress for Cultural Freedom (CCF),⁸ had their own impact on the local scene.

The following section will focus on how digitisation can be a chance for modern art from marginalised regions to gain more visibility and how to reconstruct context with the help of keywords.

⁷ For further information on Beirut as a cultural hub see for example Creswell 2019, Maasri 2020 and Rogers 2021.

⁸ For further information on the CCF and the role of the US in promoting abstract art see Creswell 2019 and Franke et al. 2021.

3 Emancipation Through Digitisation?

The increase in data networks between institutions and initiatives results in additional visibility via linked open data (LOD). This development has opened new doors with regards to information retrieval as “it brings to light the long tail, i.e. everything that was lost in the canonisation process” (Kohle 2013, 36).⁹ Included are therefore also artworks, artists, writings, and intellectual productions that have hitherto been outside the respective canons. According to Hubertus Kohle, this “de-canonisation effect” (36; German *Entkanonisierungseffekt*) is due to a changed methodical workflow in which search queries are not answered based on pre-selections but are rather purely data-driven. This means that the retrieval process has become more ‘egalitarian’, in that both well-known and lesser-known artists, writers, and their works can now be shown as relevant results.

For in the *long tail* of the digital, an object becomes available at least and is only a mouse click away from the work of the century. In the analog world, it was either never even present, e.g. if it had not been addressed by the scientific literature, or it was published in such a marginal place that it did not enter the researchers’ field of attention. (37)¹⁰

However, according to Richard Rogers, this has to do with ambiguous (as opposed to unambiguous) search queries that broaden the scope of the results in an often-fruitful way (Rogers 2017, 93). Search results that are open to ambiguity will most likely also include relevant keywords that may otherwise have escaped the hit list.

As a result of what could be interpreted as an ‘emancipation effect’ – but which in reality is more dependent on technical than on discursive processes – simplistic dichotomies such as “periphery” and “centre” that underpin the history of modernism and its relation to other parts of the world have become more and more questionable. They are being invalidated by non-centric theoretical approaches such as “constellational modernism” (Seggerman 2019) or the history of contact (Kravagna 2017). These approaches reject a central core or narrative, thereby flattening hierarchies. Modernism is framed as a

⁹ Original quote in German: “Sie bringt den Long Tail zum Vorschein, alles das, was im Kanonisierungsprozess verloren gin”. If not otherwise stated, all translations were made by the Author.

¹⁰ Original quote in German: “Denn im *Long Tail* des Digitalen ist ein Gegenstand wenigstens vorhanden und nur noch einen Mausklick vom Jahrhundertwerk entfernt. Im Analogen war er entweder gar nicht mehr präsent, z.B. dann, wenn die wissenschaftliche Literatur sich ihm niemals zugewandt hatte, oder er war an derartig marginaler Stelle veröffentlicht, dass er nicht mehr in das Aufmerksamkeitsfeld der Forschenden fallen konnte”.

series of overlapping and intersecting units as opposed to concentric circles emanating from the metropole. (Seggerman 2019, 8)

Seggerman's approach is particularly compelling as it implies a specific and finite number of connections evoked through trips, exhibitions, university degrees, and circulated textual and visual materials, which all play a major role in the LAWHA database and research project. What both approaches have in common is that they focus on individual contacts and exchanges, rather than on big narratives that often tend to overlook the details.

On closer inspection, the above-highlighted emancipation effect is only an indirect one since it is merely based on algorithms. Nonetheless, it is important to keep in mind that algorithms are not unbiased either and depend on factors such as the location of the search query and the browser history, for example. Also: what kind of information do search engines rank highly and which information is placed at the other end of the list? Theoretically, visibility can be actively promoted via keywords and linked open data and is as such tentatively emancipatory in the larger sense. Practically, the "googlearchies", that is the hierarchies established by Google's PageRank algorithms, "boost certain websites and bury others in the results" (Rogers 2017, 77) thereby reintroducing hierarchies in what was previously advertised as a field of democratic participation. Another important aspect of search engine results critique brought forward in the literature (e.g. by Rogers), are filters that deliver personalised and localised results rather than universal ones. Rogers points out that this is not least in part due to users' preference settings:

There is the question of detecting how many and which results are personalized in one form or another, according to one's location (country as well as locality), language, personal search history as well as adult and violent content filter. (Rogers 2017, 80)

Equally important is the fact that data is largely entered by humans and therefore always subjective and selective. An imbalance is therefore inscribed into every data collection and entry process: which data is recorded, and which is not? This is highly interpretative. One could say that the digital world is a reproduction of the analog world with all its biases and power imbalances, but with the promise of greater democratic participation (despite Google's reintroduction of hierarchies as pointed out by Richard Rogers). Regardless of this, the potential of the digital world to bring together and to semantically link information of all kinds and provenances is something that has previously never been possible on such a large scale – even if it appears only as part of the "long tail". Ideally, this would lead to a transregional network of artworks and artists, ideas and iconogra-

phies, etc. that would allow for new discoveries, invite for exploration, and ultimately expand the canon. This is something that could be achieved in the digital world, and perhaps consecutively in the analog world too. However, one must be aware of the risk of distorting meaning when isolating documents from their original context, as will be explored later.

The focus in the following paragraphs will be on keywords that could help reconstruct the history of art in Lebanon and enhance its visibility. Firstly, some preliminary thoughts on the organisation of information and knowledge will be briefly introduced.

4 Knowledge Organisation in the Semantic Web

Although the terms information organisation and knowledge organisation are often used interchangeably, there is a fundamental difference between information and knowledge. Knowledge is organised as a network and has many interconnections and layers that are cross-temporal, cross-disciplinary, cross-regional, and cross-cultural among others. Knowledge consists of information, but also of insights or ‘truths’ that cannot always be captured in a medium. Orally transmitted knowledge, for example, is irreversibly lost once the chain of transmission is interrupted. Within the field of library and information science, however, the terms information and knowledge are used synonymously:

Suffice it to say that both terms certainly are used, and with the same meaning, which is the organization of that which is known so that it might be the product of the process of information retrieval. (Smiraglia 2014, 13)

In order to be retrieved, information is by necessity medium related. It sometimes appears as data when it is measurable or verifiable information, such as that found in résumés.

Information is sometimes defined in terms of data, such as ‘data endowed with relevance and purpose.’ A datum is given; it could be a fact or, at a more elemental level, a sense perception. (Svenonius 2000, 7)

However, information cannot always be converted into data, for example when it comes to information that is not factual but rather falls within the realm of abstract ideas, such as aesthetic reflections or philosophical considerations. Here, classification is much more difficult a task. Crucial to any database is information that can be assigned a date, size, or name (e.g. the foundation date of a gallery,

its name, address, the number of exhibitions held). To push the definition one step further, one could also say: information becomes data if it can be measured and transferred into a structured, machine-readable form as part of a database. The essential goal of information systems is therefore to collect information in the form of data, to classify it, and – as in the case of digital databases – to create a machine-readable format to generate new, or enrich existing, knowledge in the future.

How is information organised in the semantic web? The semantic web is the subsequent development of the World Wide Web and a formal model for knowledge representation, exposing concepts and their relations to each other. It not only connects the data itself, but also its meaning and context. In the semantic web, machines can independently correlate content and data based on algorithms. How are the semantic web and ontologies connected? As a philosophical concept, ontology is concerned with the study of being. In information science, this terminology has been adopted to describe the structure of knowledge domains consisting of standardised terminologies and relations. The characteristics of ontologies – as opposed to simple databases – have been described by Tom Gruber as follows:

In the context of database systems, ontology can be viewed as a level of abstraction of data models, analogous to hierarchical and relational models, but intended for modeling knowledge about individuals, their attributes, and their relationships to other individuals. [...] For this reason, ontologies are said to be at the “semantic” level, whereas database schema are models of data at the “logical” or “physical” level. (Gruber 2008)

Ontologies are the building blocks of the semantic web. In contrast to philosophy where ontology as a concept is used in the singular form, in information science there are numerous ontologies, each describing a specific knowledge domain. Ontological considerations always play a key role in the design of databases. In every data model, there are assumptions about specific aspects of the world and the information that is to be captured. Determining which tables are created, which columns they consist of, and how the network of their relationships is designed, is the result of a specific take on ‘reality’, which is always highly subjective. It implies the pre-structuring of specific subject areas through the data model, which is certainly a reductive but, at the same time, unavoidable approach. The same subject area can be based on entirely different data models depending on the guiding questions. The “intellectual foundation” (Svenonius 2000) of knowledge organisation is therefore crucial.

Ontologies play an important role as reference models as they bridge otherwise disparate data models. They can also be helpful

in designing new ones. A data model that is based around a general view of a specific subject area allows the import of new data with a different structure without any major difficulties. One such conceptual reference model is CIDOC-CRM, which provides the “semantic glue”¹¹ to connect different sources of cultural heritage information. CIDOC-CRM is a formal ontology (as opposed to a domain ontology such as LAWHA) and a theoretical and practical tool for information integration in the field of cultural heritage. It provides definitions and a formal structure to describe concepts and relations used in cultural heritage documentation. LAWHA’s data model is compliant with CIDOC-CRM as it models a specific knowledge domain within the field of cultural heritage. Hence, interoperability of the LAWHA ontology with other data models based on the same conceptual reference model is provided.¹²

How is the LAWHA ontology structured?¹³ It contains the following items: Artwork, Exhibition, Person, Periodical, Book, Life Event, Collection, Organisation, Issue, Provenance Event, Parent Event, Document, and Contribution [fig. 1]. These elements of the database cover a variety of information related to the trajectories of artists and artworks such as: Who exhibited with whom and where? How is an artist’s productivity interrelated with certain phases and geographical locations? Who did artists interact with (and who were they potentially influenced by)? How did artworks circulate (or did not)? How has the art market developed? How do publications interrelate with the development of the artistic field?

11 <https://cidoc-crm.org>.

12 LAWHA is not fully compliant with CIDOC-CRM. It is a rather complex museum standard, which is not necessary for LAWHA’s purposes. However, in the future, institutions may want to use LAWHA’s API (Application Programming Interface) to use the data. Full compliance can be provided at a later stage if needed.

13 LAWHA’s data model was developed together with Valentina Pasqual and Marilena Daquino from the Digital Humanities Advanced Research Centre/DH.arc of the University of Bologna. The data model can be viewed here: Pasqual, Daquino 2022. <https://doi.org/10.6084/m9.figshare.21542391.v1>.

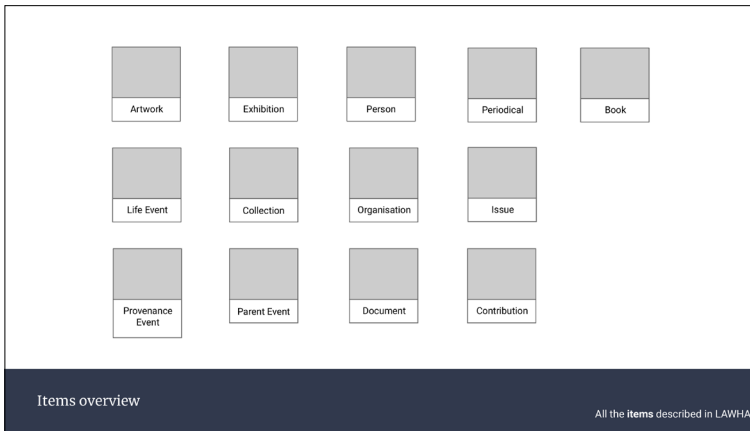


Figure 1 LAWHA data model: items overview. © LAWHA

To try and understand how the different items are related within the database, the item ‘document’ has been chosen (fig. 2). The instances or types of documents are manifold, for example address books, letters, diaries, notebooks, sales lists, price lists, invitation cards, e-mails, etc. The document can be in relation to a person and/or an organisation (which can be the creator, a participant, a copyright holder, etc.); it can also be in relation to a book or a collection (as part of the collection or within a publication). Theoretically, other relations are possible, but these are the ones that are relevant for LAWHA and its research questions. Data modelling is a process which evaluates the relevancy of information in light of the guiding research questions. Relevance is more important than completeness.

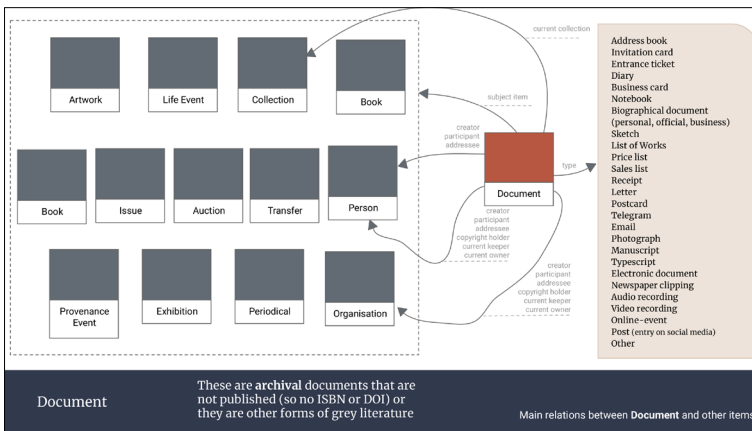


Figure 2 LAWHA data model: item ‘document’ and its relations within the database. © LAWHA

The different items in the data model are not only interrelated but are also composed of many facets, which themselves are guided not least by potential interests of future users (mainly scholars, curators, students, teachers, and artists). These comprise information such as ‘title’, ‘creator’, ‘participant’, ‘language’, ‘genre’ but also media related data such as materiality, dimensions, colour, etc. [fig. 3].



Figure 3 LAWHA data model: item ‘document’ and its attributes. © LAWHA

Another more complex example within its network of relations is the item ‘person’ [fig. 4]. In contrast to the item ‘document’, ‘person’ is at the centre of all possible relations. The arrows pointing towards

‘person’ are relationships where the person is the subject, i.e. ‘Artist x created artwork y’ or ‘Collector x is the current owner of collection y’. These relationships are usually expressed in triples consisting of subject, verb, and object, which form the basis of the semantic web. ‘Person’ also has a relationship to ‘organisation’ which it can be a member of or represented by, for example. ‘Organisation’ is independent from ‘person’ and on a higher structural level than an individual; therefore, the arrow points in the opposite direction, namely from ‘person’ to ‘organisation’.

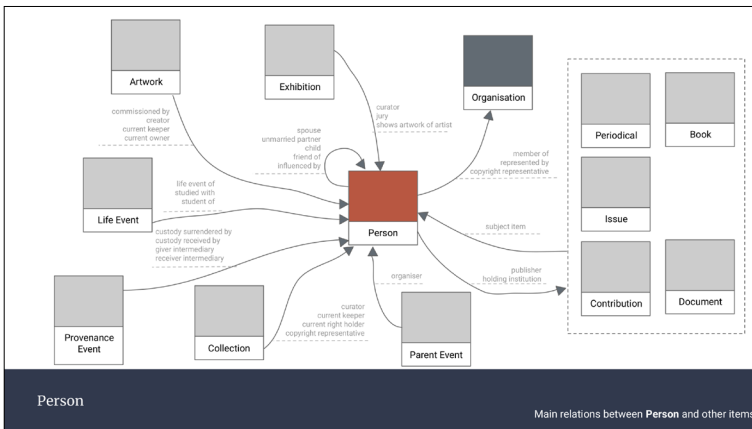


Figure 4 LAWHA data model: item ‘person’ and its relations within the database.
© LAWHA

These examples and their network of relations apply to all items within the LAWHA ontology. When organising knowledge, not only does the data model play an essential role but so do the keywords too, as will be further explained in the following section. This is particularly important for the retrieval of data. Keywords are also essential for the contextualisation of knowledge and to link it to information inside and outside of the database. They establish relations such as those between persons, events, ideas, movements, literature, music, or political concepts.

5 Keywords as Entry Points to Knowledge

The LAWHA database and digital platform will be fully searchable, which means that users will be able to conduct keyword searches relating to, for example, educational institutions (e.g. showing the names of all students at any one time), exhibition places (e.g. show-

ing all the exhibitions that took place there and all the artists that exhibited together), years and time periods (e.g. showing all exhibitions that took place or artworks produced in a particular year, exhibitions within a certain time period, etc.), cities (e.g. showing all artists that came through it and when), artists, gender, artworks (e.g. exhibition history, movement), critics (e.g. their reviews/writings). Advanced search options will also be possible (e.g. searches for all Lebanese women artists in Paris in 1964). There are several possibilities to conduct keyword searches, among them are the guided and the free search, which can also be combined. The guided search is helpful in order to give users an idea of what they can search for.¹⁴ In the respective fields, they can select from a drop-down menu among all indexed keywords (see the context vocabulary presented further down). The free search, on the other hand, is advantageous when documents are fully searchable, as it allows users to search for a combination of words, names, or numbers, for example.

For precise information retrieval and to make it linkable via LOD, using controlled vocabularies in the database rather than simple keywords is important. Controlled vocabulary is normalised vocabulary, which means that it excludes ambiguities and has a hierarchical relationship to other terms. Another advantage is the multilingualism of controlled vocabulary. This is the case with the Getty Art and Architecture Thesaurus (AAT),¹⁵ which lists terms in multiple languages. Arabic translations are still rare, but something that should, and definitely will, be developed in the future. AAT is crucial and relatively comprehensive in this regard and extends beyond the actual description of artworks to materials, technique, genre, pictorial elements, and subjects. The AAT also provides vocabularies for the description of exhibition, document and institution types, distribution formats, as well as publication types and genres, for example.¹⁶ Wikidata also plays an important role but is – at least in its current state – more suitable for individual than for conceptual terms, such as those provided by the AAT.

LAWHA uses controlled vocabulary to describe the different classes and their relations within the structure of the database (mainly Wikidata and CIDOC-CRM in addition to some LAWHA specific vocabularies). For the description of artworks and documents an internal thesaurus with relevant vocabularies from the AAT and Wikidata

14 See the example of the Accademia di San Luca cited by Joshua Sternfeld, 2011, 558-60.

15 http://www.getty.edu/vow/AATHierarchy?find=wood&logic=AND¬e=&english=N&prev_page=1&subjectid=300012512.

16 For further information see Harpring 2013.

will be created.¹⁷ What can be done when appropriate vocabularies cannot be found? One possibility is to create new entries in Wikidata, and thereby references, with a unique identifier that others can also use. In the future, LAWHA may also suggest terms that are relevant to the AAT or Arabic translations of specific terms to be included in the Getty thesaurus. This is a longer process, however, that will not provide short term solutions for missing vocabularies. Another possibility is therefore to work with SKOS (Simple Knowledge Organisation System)¹⁸ whenever an exact term is not available, e.g., ‘group exhibition’.¹⁹ The latter is an important term for the LAWHA knowledge organisation which is neither available in the AAT nor in Wikidata. However, with SKOS it is possible to match this term with the AAT entry ‘exhibition’ by assigning it a mapping relation such as ‘skos:broadMatch’, for example.²⁰ Since this term is a concept rather than an individual term, AAT is most suited to this specific case. The advantage of using SKOS is that knowledge organisation systems or single terms can be expressed and published as machine-readable data. When organising domain specific knowledge as in the present case, it is important to focus on the guiding research questions and organise the vocabularies accordingly, rather than settling for the available, and at times inaccurate, vocabularies. SKOS can therefore provide effective solutions to bridge the gaps when describing certain phenomena.

Despite all of this, the formation of a consortium consisting of libraries, research institutions and projects, museums, and galleries that focus on the development of Arabic and context specific vocabularies including terms from art, literature, film, music, theatre, and culture would be a trailblazing initiative. So far, there is no approved authority within the Arab countries to mandate the use of a particular tool or standard.²¹ Building one’s own multilingual thesaurus (includ-

17 LAWHA has discarded the option of using the Iconclass classification system. Despite it being used in many museums around the world, and being a very useful tool for the classification of artworks prior to the twentieth century, it is not practical for non-European contexts as Iconclass is mainly based on Western iconography (<http://www.iconclass.org/help/outline>).

18 <https://www.w3.org/TR/skos-reference/#L879>.

19 LAWHA is grateful to NFDI4 Culture (<https://nfdi4culture.de/de/index.html>), notably Angela Kailus and Katja Sternitzke, for sharing their knowledge.

20 For the possible mapping relations refer to: <https://www.w3.org/TR/skos-reference/#L4138>.

21 In their online-lecture “Challenges facing catalogers in describing and indexing Middle Eastern books and periodicals” (9 February 2022), Fatme Charafeddine and Basma Chebani (American University of Beirut Libraries) highlighted the fact that initiatives for knowledge organisation are not comprehensive and, in most cases, discontinued. There is a need to create Arabic ontologies with specialised domains. The speakers stated that many of the available Arabic thesauri such as Maknaz, Agrovoc,

ing Arabic), is a practical way to capture context-specific controlled vocabulary, and at the same time achieve more visibility for the arts and cultures from the Arabic-speaking world. This is a long-term project that will depend greatly on the commitment of its participants.

6 How to Capture Context?

What do we mean when we speak of contextual vocabulary and why is it important? Context provides information on the political, cultural, intellectual, artistic etc. backgrounds of individual artistic approaches and processes and helps to situate artworks in their respective environment. Whilst this does not mean that we can draw linear or direct conclusions concerning the creational process itself, creation does not, however, take place in a vacuum and is always related to the environment from which the artist draws their inspiration. This can at times be very personal and intimate, or barely discernible, whilst at others it is very explicit or occurs as a reaction to political developments.

This leads to the question of provenance of such a context-related vocabulary. It is sometimes part of the iconography of the artwork itself, most often it appears in the discourses, debates, correspondence, and artists' writings that can be found in the archival documents and in secondary sources, such as scholarly publications. When attempting to revisit or reconstruct art history, this kind of information is essential as it helps to put the works in perspective. However, one has to be careful not to essentialise. Any reconstruction can only be tentative. On the other hand, providing context and associating artworks and artists with certain ideas or movements, for example, can provide a fresh outlook on things.

The LAWHA data model offers numerous possibilities to link persons, documents, artworks, ideas, concepts, art movements, and other items with each other, thereby creating a network of diverse information. Contexts that are important to the LAWHA project extend from the political context, including subcategories such as conflicts, political movements and activism, forms of government, and person-

Shamaa, and POHA (Palestinian Oral History Archive) could be converted to ontologies using RDF. The problem is that many vocabularies cannot be found when using Library of Congress Subject Headings (LCSH). This is due to "biased and superficial subject classification", especially in the fields of Islam, Arabic language and literature, history, and politics of the Middle East. The Arab Union Catalog, initiated by the King Abdulaziz Public Library, Saudi Arabia, provides a bibliographic database and authority files. One of its aims is the development of standards and tools for knowledge production. However, the catalogue is limited in terms of diversity and inclusion, said the two speakers. The recording of the lecture can be found here: <https://www.youtube.com/watch?v=eSNW2gQVJXc>.

al experiences (e.g. exile, friendship, censorship), to the cultural context, which includes cultural debates, spiritualism and religion, to the artistic context, including artistic and aesthetic debates, or schools.

In the following, a preliminary, but by no means comprehensive, list of possibly relevant keywords in the context of LAWHA has been compiled. These keywords originate from Wikidata. The combination of the letter 'Q' followed by a sequence of numbers indicate the Wikidata identifier. In the case that keywords cannot be found, LAWHA will create Wikidata entries. The main purpose of listing them here is to give the reader an idea of what the context vocabulary may look like and how it may be structured. The context extends beyond Lebanon to include neighbouring Arab countries as well as events on the global scene, such as the Vietnam war. Many artists, writers, and intellectuals from neighbouring Arab countries came to Lebanon in the 1950s, 1960s, and 1970s transforming the capital Beirut into a centre for alternative ideas, political convictions, artistic practices, and motifs. All this is part of the context and will be reflected in the vocabularies.

As mentioned above, the keywords have their provenance in the archival material and secondary sources, but also in the artworks themselves (for example with regard to iconographic information) and serve to link artists to historical events, debates, and artistic reflections of the time. An article on visual art in a Lebanese Arabic language journal from the 1950s, for example, will probably include questions of artistic authenticity and identity, the relation between East and West, the choice of colours and subjects, and the role of the artist in society. Whereas keywords such as 'authenticity' and 'identity' can be found in Wikidata, more descriptive relations such as those between East and West or the 'role of the artist' have to be used in a full text search query. Two problems relating to Arabic text arise here, one of which can be solved relatively easily: 1) Arabic sources are up to now not fully OCR readable; 2) the keywords in Wikidata are in English and might on rare occasions have an Arabic translation. LAWHA will therefore strive to add Arabic keywords to the Wikidata entries.

In the following listing, the vocabularies are bundled into three main categories – political, cultural, and artistic context – and a finite number of subcategories each containing specific entities. The structure of the list will later appear in a guided search and help users to initiate queries.

1. Political context

– wars

Lebanese Civil War (Q208484), Lebanon War (Q49104), Six-Day War (Q49077), Gulf War (Q37643), Vietnam War (Q8740), World War I (Q391),

World War II (Q362), Cold War (Q8683)

– *forced displacements*

nakba / forced expulsion of Palestinian Arabs from Israel, 1947-48 (Q3266633)

– *massacres*

Sabra and Shatila massacre (Q208199), Tel al-Zaatar massacre (Q2359563), Armenian genocide (Q80034)

– *colonialism*

French mandate for Syria and the Lebanon (Q139708), Mandatory Palestine (Q193714)

– *historical entities*

Ottoman Empire (Q12560)

– *political movements / activism*

leftism (Q2660346), communism (Q6186), nationalism (Q6235), Syrian nationalism (Q1428893), Arab nationalism (Q114213), Pan-Arabism (Q193476), feminism (Q7552), fedayeen (Q989678)

– *political concepts, ideologies*

ummah / nation (Q205766), liberalism (Q6216), confessionalism (Q2749417), Marxism (Q7264), secularism (Q216920)

– *personal experiences*

imprisonment (Q841236), emigration (Q187668), exile (Q188863), forced displacement (Q837556), censorship (Q543), friendship (Q491)

2. Cultural context

– *cultural debates, discourses*

Nahda / cultural movement in the Arabic speaking world (Q1520921), cultural identity (Q1368367), Orient (Q205653), Western World (Q160381), authenticity (Q21074933), imitation (Q1131737), adaptation (Q1213562), cultural heritage (Q21022), modernity (Q11084414), mythology (Q9134), tradition (Q82821), orientalism (Q42865), colonialism (Q7167), postcolonialism (Q265425)

– *ancient civilisations*

Mesopotamia (Q11767), Sumer (Q35355), Phoenicians (Q1048468)

– *philosophy*

humanism (Q46158), morality/morals (Q48324), materialism (Q7081)

- *religion*

Islam (Q432), The Qur'an (Q428), Christianity (Q5043), atheism (Q7066), Sufism (Q9603), Mysticism (Q16861950), spiritualism (Q2636432)

- *scientific context*

Mathematics (Q395), Geometry (087)

3. Artistic context

- *artistic debates*

abstract art (Q128115), figurative art (Q162217), colors and forms, modernism (Q878985), art for art's sake (Q772046), taste (Q1143012), beauty (Q7242), folklore (Q36192)

- *movements*

Hurufiyya movement (Q55614094), School of Paris (Q273506), surrealism (Q39427)

In practice, the relevant keywords will be listed in the database together with the metadata of the respective document, i.e., a diary, letter, manuscript, etc., which in turn is linked to its creator [fig. 5]. Contextual vocabulary, however, is not limited to artworks and documents but also includes the categories 'book', 'contribution', 'issue', 'periodical', 'exhibition', 'organisation', and 'person', which provide the possibility for entries via the field 'main subject'.

Figure 5 Screenshot of LAWHA’s Omeka S database showing an excerpt of the item ‘document’ and the detail ‘main subject’ where contextual vocabulary can be added. © LAWHA

In the future – once all database entries have been edited and reviewed and the front-end has been designed – queries on specific artists will show a) all data available in the artists’ dossiers, i.e. the date and place of birth, places of education, teachers, exhibitions, awards etc. (see **figs. 6** and **7** database item ‘life event’); b) all their artworks that are part of the database (and ideally they will link up to works in other collections outside of the LAWHA database); c) all related archival material in the LAWHA database (at least the ones that can be made accessible to the public without any legal or ethical constraints; others may be available upon request or restricted to in-place-use); d) relations to other persons (artists, writers, composers, etc.), other artworks, ideas, debates, schools, movements, etc.

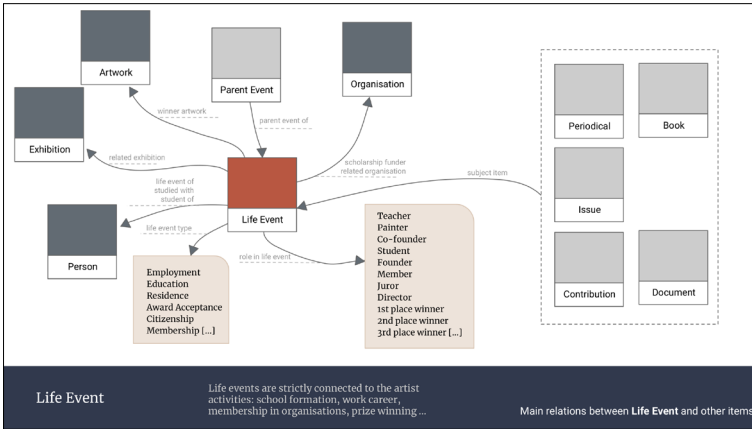


Figure 6 LAWHA data model: item ‘life event’ and its multiple relations. © LAWHA

All relations having Life Event as subject

Life Event

lawha:LifeEvent

<input type="checkbox"/> ** attributed name lawha:attributed-name	<input type="checkbox"/> teaching subject lawha:teaching-subject	<input type="checkbox"/> date wdp:P585
<input type="checkbox"/> life event type lawha:life-event-type	<input type="checkbox"/> acquired degree lawha:acquired-degree	<input type="checkbox"/> awarded artwork lawha:awarded-artwork
<input type="checkbox"/> role in life event lawha:role-in-life-event	<input type="checkbox"/> scholarship funder lawha:scholarship-funder	<input type="checkbox"/> reason of award lawha:reason-of-award
<input type="checkbox"/> start time wdp:P181	<input type="checkbox"/> studied with lawha:studied-with	<input type="checkbox"/> life event of lawha:life-event-of
<input type="checkbox"/> end time wdp:P1875	<input type="checkbox"/> student of lawha:student-of	<input type="checkbox"/> bibliographic reference wd:P1343
<input type="checkbox"/> location wdp:P276	<input type="checkbox"/> received award lawha:received-award	<input type="checkbox"/> online reference wd:P973
<input type="checkbox"/> related exhibition lawha:related-exhibition	<input type="checkbox"/> related organisation lawha:related-organisation	<input type="checkbox"/> notes lawha:note

Figure 7 LAWHA data model: item ‘life event’ covering e.g. instances ‘education’, ‘employment’, and ‘award acceptance’. © LAWHA

7 Conclusions

This paper aimed to outline some of the factors that come into play when attempting to reconstruct knowledge using digital means. Digital art history with its capacity of visualising networks, patterns, and trajectories certainly has its benefits. However, this is where the real research and questions commence: which new questions may derive from this? What can we read into these patterns and how can we analyse the data qualitatively and in more detail? The fact that a critic has written many articles for a newspaper or magazine, for example, does not say anything about the importance of their writings in terms of outreach or intellectual input. Van Es and Schäfer point out that despite data sets being able to provide new insights through granularity, “their possibilities are frequently overestimated” (2017, 15). Often, these insights remain at the surface and are expressed in the well-known network graphs consisting of nodes and edges (“hairballs” or “bowls of spaghetti”, Venturini et al. 2017, 168) that mostly illustrate what we already know. However, some of the present, and perhaps all future, tools carry the promise of an “enhanced capacity to ask new humanistic questions that would otherwise not be possible” (Sternfeld 2011, 549).

The article has elaborated on the importance of keywords and controlled vocabularies that act as the glue holding the different types of data together and in relation to each other, and makes information classifiable and retrievable. The digital can be a chance for more inclusiveness with regard to art historical relevance whether locally, regionally, or globally. When reconstructing knowledge with selected pieces of formerly coherent archives, it is important to provide context information about the sources through metadata. Transparency regarding the limitations of the database and its ability to provide historical accuracy is key. Highlighting specific aspects of history and thus creating relevance may lead to false conclusions and eventually a distortion of history. But is this not the case with any historical representation? It is therefore essential to point out that the priority of the LAWHA database is to answer specific research questions and not to strive for completeness. Therefore, the goals of database projects and digital collections differ significantly from those of archives. They do, however, complement each other. The decontextualisation and recombination of database information that has previously not been put in relation leads to new narratives that might sometimes fall more into the domain of fiction than that of facts. These “database histories”, as Steve Anderson coins them, are

histories that are comprised not of narratives that describe an experience of the past, but collections of infinitely retrievable fragments, situated within categories and organized according to pre-determined associations.

A database of ‘retrievable fragments’ invites users to generate associations previously unconsidered, but, at the same time, it can establish the dangerous precedent of generating erroneous narrative constructions. A search query can lead to the false expectation that all hits within the query possess an inherent link to one another. Users may be tempted to construct false relationships among disparate pieces of information, swayed by the notion that they share some commonality under the umbrella of a search term. (Sternfeld 2011, 556-7)

Therefore, information needs to be contextualised historically as much as possible to limit erroneous associations and conclusions.

Finally, the aim of LAWHA is not to reconstruct history but rather to offer the means for the rereading or reinterpretation of history and to gather information for possible artists’ biographies in the future. In conclusion, reconstruction may be a misleading term since the original state can never be reassembled retroactively. Any reconstruction will always be a *new* construction.

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