

Title paper proposal
The registration of art and design research outcomes: Visualizing the invisible
(Case study: The Flemish FRIS-registration format)

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Introduction

Research evaluation practices - and the measurement of research quality and impact they imply - are being looked at from very different angles. For research information managers transparency and access probably constitute the most urgent issues at the current moment, while R&D directors and research policymakers devote their attention to the ethical consequences and practical implications of open access and open data (NordFosk, 2016). There is another important pressing preoccupation of the latter group, namely the validity and robustness of current research evaluation protocols.

Existing research evaluation models all depart from registered data in institutional and/or research policy CRIS. The most heard concern in research management circles relates to the identification and implementation of systematically collected and well-documented objective metrics for impact measurement, especially societal impact measurement (Bornmann, 2013). A second worry in the same midst has to do with the steady rise, both proportionally as with regard to policy appreciation, of practice-based research. In sharp contrast to the standard practice of communicating research results in the form of publications, outcomes resulting from applied research often are not communicated through writing but rather take on quite different dissemination forms. Registration systems for non-written output of national evaluation frameworks, research funding agencies etc. are not always open and considerate towards non-written output. Within these databases, non-written outcomes lack a systematic informative organization, therefore visibility and as a result thereof recognition in terms of quality and impact valuation (and the subsequent funding that is attached to that).

Focus of the paper

We suggest that the difficulties in the registration and measurement of artistic research are situated within at least three distinct, but related levels: 1) on the conceptual level, there is no tradition in artistic research registration and consistent evaluation, 2) therefore, there is a lack of metadata models and standards which leads to 3) a limited amount of specific support in available commercial CRIS systems. In this paper the central Flemish registration format designed for art and design research outcomes (ready for use but not in use yet) is used to illustrate the registration and evaluation challenges at stake.

Registration and evaluation issues (case: Flemish format for art and design outcomes)

Art and design research outcomes are an important research segment, not in terms of their share within the totality of research output in Flanders, but rather in terms of their innovativeness and the collaborative contexts with non-academic parties in which they are developed. In research impact assessment exercises such as the Dutch SEP (Standaard Evaluatie Protocol) and the European SIAMPI (Social Impact Assessment Productive Interactions, EU) stakeholder collaborations are considered to impact and thus taken as proxies in societal impact calculations (Hill, 2014; Bornemann, 2013).

Seen from a research information management point of view, a registration format design for art and design research outcomes has its significance. Registration issues within these fields are fine examples of the challenges identified by research communities and networks devoted to 'effective use of technology' in the communication of findings and results such as the Scholarly Communication Institute Force11 (www.force11.org) and Go-fair promoting findable, accessible, interoperable and re-usable data (www.go-fair.org). As research outcomes in the traditional scientific domains increasingly start to be disseminated in other forms and through different channels the registration issues of art and design outcomes will become familiar within the broad research landscape.

Paper organization:

The paper comprises six short sections that tackle registration and evaluation problems of non-written research outputs and is organized as follows:

- (1) A first section entitled 'Registration and evaluation: good fellow(ship)s' scrutinizes the **registration problems** for art and design research outcomes. It describes the intricate relation that exists between the registration of research data in CRIS and research evaluation practices. The section illustrates how increasing demands in ex-ante and ex-post evaluations are putting the usability and robustness of current registration systems under severe pressure. We will highlight the problem of how traditional metadata in CRIS due to the dramatically changing nature of research and its outcomes do not longer suffice *in se* to provide the necessary information for an informed quality and impact assessment of art and design outcomes.
- (2) A second section ('Visualizing the invisible: **evidencing and documenting** the research component') focuses on the aforementioned challenge related to the registration of non-written output. Research outcomes in the form of an artwork, an exhibition, a dataset, ... are realizations in their own right in research assessment exercises. In research evaluations, the submission of non-written outcomes presupposes additional textual information, e.g. a 300-word research statement in the case of the UK Research Excellence Framework or the Excellence in Research for Australia. This accompanying or surrounding text that informs the reader of the research questions, methodologies, findings etc. is registered nor archived nor put available in any other form in institutional CRIS. Bluntly said, in most CRIS a registered non-written output *embodies* the research conducted by its maker and the knowledge to which it has led. It is *tacit* but in order for the research findings to be communicated to and understood by the art and design research communities it requires articulation and explicitation (Biggs & Karlsson, 2011; Friedman, 2008) which is provided within the framework of national evaluation exercises as separate documents but which is not included in most CRIS, let alone modelled in some harmonizing manner on an international scale. This situation severely undermines the possibility for art and design research communities to negotiate and obtain a suitable and robust metadata model with commercial partners (such as Elsevier, ...).

In the Flemish registration draft for art and design research outcomes the requirement to document and evidence the research component has brought additional fields in the metadata format used for evaluation purposes: research context, evaluation panel, impact description, impact reference. The need for textual articulation and additional documentation is fiercely contested by some fractions within the art and design research communities in Flanders. It is for that reason that a central registration format has been designed and built but not been implemented in evaluation practice yet.

- (3) Metadata destined for the description of the research context and impact description (plus reference/evidence) are not the only additional requirement for an informed peer evaluation. Descriptive data providing information of the visual appearance of the artwork and the ways in which it has been disseminated to the research communities, the communities of practitioners or the communities of art and design students are equally required in the set of metadata. In the third section of the paper 'Visualizing the material: **illustrating the obscure metadata** (showing the artworks)' we touch upon the need for a 'visual representation' of some kind to showcase the outcome as the title alone is anything but telling or informative. The question if and if so how a 'representation' of an artwork, especially in the case of ephemeral events, relates to the outcome performed in reality for a live audience is a thorny and still unresolved issue in the domains of music and the performing arts. The problems related to the accessibility of artworks stored within institutional repositories, consulted much later in time by peer reviewers and the technical issues involved are also tackled and discussed in this section.
- (4) '**Sharing** research findings and knowledge within and outside the communities', the fourth avenue of thought in the paper, considers the desire of some of the Flemish art and design research communities to be an integrated part of the broader research communities. Instead of choosing for an evaluation system based upon an ad hoc portfolio assessment as it the case in the Research Excellence Framework (UK), Flemish representatives have opted for an inclusive approach of art and design research outcomes within the existing regional central research information database FRIS (*Flemish Research Information Space*) exploited by the Flemish Ministry for Education, Science Policy and Innovation. This contributes in the first place to the visibility, the accessibility and possible re-use of art and design knowledge, findings and insights. In second instance and more importantly for exchange possibilities,

registered data in FRIS are permanently stored and archived and therefore susceptible to a much higher exchange and re-use rate than portfolios stored in physical archives or in the form of a limited description without articulation of the research findings.

(5) **Benchmarking** not measuring as evaluative practices

Bibliometric analyses have been proposed as a solution to subjectivity and time investment problems of peer review evaluations. There have, however, never been free from criticism (Whitley & Gläser, 2007). In origin, a method to find and disclose research information for investigative purposes, bibliometrics gained great acceptance as a calculation tool at the time when policymakers faced by decreasing funds available for scientific research turned to performance assessments as an 'objective' distribution key. The turn towards performance measurements and research evaluations spurred the development of national, regional, institutional research information systems which due to technological advancements is able to provide a wealth of combined and contextualized research information.

The same evaluation purposes, however, invite bibliometricians and policymakers to revise assessment algorithms and practices for the sake of validity and robustness (Lepori, Reale & Thijssen, 2011). Claims for a combination of peer review and bibliometrics or at least a domain-specific set of proxies find a growing resonance in order for a contextualized evaluation to take place. A contextualized evaluation takes into account the specificity and diversity of a scientific research field (Ochsner, Hug & Daniel, 2013). In a contextualized evaluation paradigm a singular definition for what research quality is, is refuted. A contextualized evaluation considers a specific subfield of a discipline, identifies what possible features of research quality are (in an open and inclusive way) and benchmarks (not compares) each outcome according to these descriptions. In order for such an evaluative benchmarking to take place, existing CRIS-systems will have to comprise additional information.

(6) Conclusive remarks

Research data in CRIS is increasingly used for evaluative purposes in bibliometric or peer review assessments. In the paper we scrutinize the problems with current registration formats for art and design research outcomes in Flanders in the FRIS-database and provide an overview of the solutions formulated by stakeholders, research coordinators from the fields. The articulation of the research component of non-written output and the illustration of the outcome constitute the two main challenges in current registration practices. We contended that only when actual CRIS-metadata models are extended with this crucial kinds of research information can registered research outcomes be taken as a point of departure for evaluation purposes, shared, consulted, discussed and disseminated among interested parties.

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