1

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- 1.1 Current State of Research and Discussion
- 1.2 Our Research Journey and This Book

Can annotated videos serve as a medium for the primary publication of research results? Which new tools, practices, and standards do we need to make it possible? This was the main research question of our project. The present handbook summarizes the results of our research project Research Video, which was executed at the Zurich University of the Arts between 2017 and 2021, led by the Research Focus Performative Practice and the field of study Cast / Audiovisual Media. It was funded by the Swiss National Science Foundation.

We felt—and still feel—that this is an important issue, as certain forms of knowledge and knowledge generation appear to be disadvantaged in the current text-based system for publications. To get a direct impression of the tool and how it works, please visit our website:

www.researchvideo.zhdk.ch

For more than 100 years film and video have been a crucial part of research in various fields like ethnography, sport science, and behavioral sciences, and now increasingly in the field of artistic and design research. With the rise of digitalization and video platforms, they start to unfold their potential as ways to generate new knowledge, share results, and challenge traditional, text-based forms of publication.

Videos are present in every step of research, from video abstracts to data collection, data analysis, interpretation, publication, and the presentation of research. How will this scenario change the way we generate new knowledge? Can a video (or an annotated video) be the sole output of an academic investigation? How will it change the way we share and challenge new knowledge with other researchers and with the public? How can we build up trustworthiness within video-based research and how can we validate it?

Research in fields such as art and design might be at the beginning of a long-term transformation from text-based to enhanced, multimedia practices of publication. The interplay of audiovisual material and language/text has already generated new formats such as video essays or annotated videos and will presumably lead to more formats that will reshape our thinking. Among others they will enable new forms of looking and reflecting on performative practices like theater, dance, and performance art, fostering particular modes of understanding tacit, embodied, and performative knowledges that may help researchers arrive at fresh insights. This calls for new ways of publishing that remix video and text, possibly altering hierarchies, turning video into the primary media and text into the secondary.

Our intention was not only to develop a digital tool, but also to describe the entire research process under the premise that at the end an annotated video would be published. We hypothe-

sized that this would change the way the researchers would think in every preceding phase of research, from the development of the research question to research design, data collection, data analysis, and discussion of results.

1.1 Current State of Research and Discussion

In the artistic research community, the problems of publication have been debated for several years with three main recurring arguments: First, the conventions for scientific publication are generally text-based, which often does not match the modus of artistic thinking and leads to a reduction of possible artistic knowledge generation, especially in the performing arts with its emphasis on embodied knowledge. Second, and related, is the difficulty in maintaining the aesthetic experience throughout the research process, which also influences the role of possible artistic output. Third, not all academic conventions in the humanities and the social sciences seem to be suitable for a transfer to artistic research without being harmful to its specific form of knowledge generation. There is a growing consensus, however, that some academic conventions are applicable, in particular the criteria of shareability and challengeability (→ see Chap. 8).

Publication Platforms

Publishers are slowly catching on to the trend by accepting video articles: for example, Elsevier and several journals accept video contributions. JoVE (Journal of Visual Experiments) claims to be “the world-leading producer and provider of science videos with the mission to improve scientific research and education” with more than 10,000 videos available. It is not a journal in a classic sense, but rather a repository, and it offers no peer review.

The platform Latest Thinking gets much closer to being a journal, as it proposes a format called “Academic Video” and presents research in a structured way with chapters analogous to a research paper, following the IMRaD Model: Introduction, Method, Results, and Discussion.

The Journal of Embodied Research claims to be “the first peer-reviewed, open access, academic journal to focus specifically on the innovation and dissemination of embodied knowledge through the medium of video.” It relies on the format of video essays and provides a peer-review process. The viewer finds the abstract as a text and can view the embedded video essay.

In artistic research two platforms are concerned with developing new formats of publication, the Journal for Artistic Research (JAR) and the Research Catalogue (RC). JAR is published by the Society for Artistic Research (SAR). It is an international, online, open access and peer-reviewed journal for the publication and dissemination of artistic research and its methodologies from all arts disciplines, with the aim of displaying results in a manner that respects artists’ modes of presentation. JAR abandons the traditional journal article format and offers its contributors a dynamic online canvas where text can be woven together with image, audio, and video. These research documents, called expositions, provide a unique reading experience while fulfilling the expectations of scholarly dissemination. The journal is underpinned by the Research Catalogue, a searchable documentary database of artistic research. The Research Catalogue reflects a very open conception. Anyone can compose an exposition and add it to the RC using the online editor; suitable expositions can be submitted to the editorial board for peer review and publication in JAR. It is an online database that has been developed as a space for the public storage and exposition of artistic research without submission to outside criteria.

1.2 Our Research Journey and This Book

The project was quite a long journey guided by these questions:

- 01 If we had a video annotation tool that is optimized for the publication of artistic research, what would it look like?
- 02 If this form of publication were the primary output of a research project, how would it transform the research process?
- 03 Could we change the hierarchy of forms of knowledge and come up with a form of research that is more sensitive to embodied knowledge?

In answer to the first question, we have developed the prototype Research Video, which we describe in Chapter 2. The second question concerns the entire research process, and we have devised a general model of the research process that serves as a map to look at the different phases and the use of annotations therein.

This model displays the research process as a sequence of transformed data (→ fig. 01). The original event (e.g. a performance) is transformed into a document (e.g., a video), which is transformed into a corpus of enriched data. Through analysis this big corpus is transformed into a selected corpus of reduced data, which then is the basis for the last transformation into a format of publication. Looking at the research process this way allowed us to be agnostic as to specific traditions of research: no matter what kind of data the research is dealing with, the underlying process stays the same. It also allowed us to trace back the impact of the anticipated output on every step of the transformation process.

There are (at least) four transformations to be made (T1, T2, T3, T4) and we identified the according practices (→ fig. 02). We later added a fifth practice as it proved to be important in the use cases. Getting access to the field can be a crucial first step of research and requires a lot of sensibility and time.

This book will roughly follow this sequence of practices in the model. Chapter 3 addresses with field access, Chapter 4 describes basic practices of video capture, and Chapter 5 covers important aspects of video editing. In Chapter 6 we present and discuss the practices of analyzing and reducing data and finally in Chapters 7, 8, and 9 we take a look at practices that lead to publication. In each of these chapters, we describe our solutions as found in applying the Research Video tool in the use cases.

From Reader to Viewer?

How will a person consume a Research Video? Of course, they will not be in the traditional role of a reader. On the other hand, they will not simply play the video as in a film performance. In fact the misunderstanding we most often encountered with the Research Video is the idea that the additional written information would display synchronously with the video, similar to subtitles. However, the amount of information necessary for scientific depth makes this impossible in principle, in our opinion. Reading or viewing the Research Video must therefore be thought of as a constant alternation between watching the video and reading the annotations.

01

02

Fig. 01:
The research process as a sequence
of transforming data
(illustration by author)

Fig. 02:
The research process as a sequence
of practices to transform data
(illustration by author)

The practice of reading becomes a new practice of reading-viewing, which is somewhere in the middle between playing a video and reading a text. If annotated videos become a new standard for the publication of research, they will have to find a balance between reading and viewing. One important observation is that, compared to video essays and documentaries, the control of reading-viewing shifts from the author to the reader-viewer, who will create his or her own path through the material.

Detours

Like most research projects, this one has not developed in a linear fashion, but has involved some detours and dead ends. There was a lot of discussion and wishful thinking that could not be put into practice. We therefore decided to dedicate a separate chapter, Chapter 10, to ideas and goals that arose during the project but could not be realized. This includes the identified needs for easier usability and easier permanent storage.

A specific problem we faced was the discovery that it proved impossible—or beyond our capacities—to edit video material after it had been annotated without losing the position of the annotation. We could not accept this at first, so we started an additional project called Sticky Annotations, which shows different technical solutions and analyzes their effort and risks. You can find the report of this subproject here:

<https://docs.google.com/document/d/1iSm3hNYGaZ9XVQcmHiGYuhSb9p2Eb6XRaSXlLMl3hrY/edit>

We were not able to solve this problem within the framework of this project, but we are convinced that it will be solved eventually and that our report will contribute to this.

Apart from this dead end, we did arrive at satisfying and encouraging results: a usable tool, multiple use cases, a practicable workflow, and a concrete vision for the publication of annotated videos as research outputs. To our great pleasure, the Research Catalogue agreed to install a gateway so that Research Video projects can be published both in the Media Archive of the Zurich University of the Arts and in the Research Catalogue. We hope that researchers from various disciplines will take up the topic of annotated videos in their research and that our preliminary work can be of use in this context.

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