

Connecting Research: The Interdisciplinary Potential of Digital Analysis in the Context of A. Kluge's Televisual Corpus

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Introduction

As a lawyer, Alexander Kluge worked for the Frankfurt Institute for Social Research. As a filmmaker, he was one of the auteurs of New German Cinema and a driving force behind the *Oberhausener Manifest*.¹ As a prolific author, he wrote countless literary pieces, as well as theoretical and philosophical works, for instance his influential *Geschichte und Eigensinn*, which he co-authored together with the social philosopher Oskar Negt. Over the years, however, the lawyer, filmmaker and author added another encompassing segment to his oeuvre that has of yet received somewhat less attention in critical academic discourse: between 1988-2018, Kluge's production company dctp (Development Company for Television Program) produced about 3.500 episodes for television. And it is this segment of Kluge's work, i.e., the so-called *Kulturmagazine*, or Cultural Magazine Programs, that provide a particularly promising starting point for interdisciplinary digital analysis. In the following, we introduce the *Kulturmagazine* themselves in order to then outline current approaches in researching Kluge's TV production, as well as the reasons why digital analysis may be particularly relevant in this context. Finally, we aim at exploring the potentials as well as challenges of such digital analysis by means of a brief yet illustrative case study in order to conclude with a short prospect for future research.

1 Matthias Uecker argues that Kluge has often been referred to as "the intellectual and organizational spiritus rector of New German Cinema". Uecker, "Rohstoffe und Intermedialität" 82. (Translation by B.H.)

Kluge's *Kulturmagazine*: Current State of Research

Kluge's *Kulturmagazine* are of considerable (TV-)historical relevance.² From the beginnings of the dual broadcasting system, they were an integral part of Germany's television scene, yet they seemed like foreign objects in the midst of the stereotypical surroundings of commercial broadcasting stations.³ Their status, however, was secured due to a peculiar stipulation that was part of the North Rhine-Westphalian media law: in the late 1980s, it was decided that commercial broadcasting stations had to offer fixed time slots to independent providers for cultural and investigative journalism, and that the provision of these segments was a prerequisite for commercial broadcasting stations to qualify as generalist channels. Kluge knew to apply for these slots, and he was awarded renewed licenses, over and over again, for 30 years. Due to the abovementioned stipulation, he enjoyed full editorial autonomy as an independent provider for television programs from 1988-2018.⁴ Kluge founded his own production company, dctp,⁵ in order to develop and produce three long-running formats for the commercial stations RTL and SAT.1: *10 vor 11* ran from 1988-2018; *News & Stories* from 1988-2017; and *Primetime: Spätausgabe* began airing somewhat later, in 1990, and ended in 2008.⁶

These three formats are collectively known as *Kulturmagazine*, and they mostly feature interviews but also more varied, almost TV-essayistic elements and episodes. As Tara Forrest puts it, these segments are constructed "out of a highly diverse collection of raw materials (including photographs, drawings, diagrams, clips from films and documentary footage)."⁷ Thematically,

2 The *Kulturmagazine* ("Cultural Magazine Programs") have, for instance, been honored with several important awards, such as the Adolf-Grimme-Preis (1992, 1993, 2010) and the Hanns-Joachim-Friedrichs-Preis (2001).

3 Schulte and Siebers, "Vorwort" 7.

4 These time slots thus came with the added advantage that the commercial broadcasting stations' usual expectations with regard to ratings did not apply. Schulte and Siebers, "Vorwort" 7.

5 When it was founded in 1987, the production company was co-owned by the Japanese advertising agency *Dentsu* (37,5%), the newspaper *Spiegel* (12,5%), and the AKS (50%), a consortium of film directors, theaters, publishers and musical institutions. Lutze, "Projekt der Moderne" 18.

6 English translations of the *Magazine*-titles have been provided, for instance, by Elsaesser: he refers to them as *Ten to Eleven*, *News and Stories* (same in German and English), and *Primetime: Late Edition*. Elsaesser, "Stubborn Persistence" 22.

7 Forrest, "Raw Materials" 305.

the *Kulturmagazine* cover a head-spinning range: from 'fake interviews',⁸ to the natural sciences, brain research, space travel and biology; from the arts, music, opera, film and theater, to history, philosophy, sociology, and politics.⁹ Apart from this encyclopedic thematic range, however, the *Kulturmagazine* at times also illustrate an intriguingly complex aesthetics, which points at potentialities of the television medium that had not yet been explored.¹⁰ On the one hand, there is Kluge's particular style of leading interviews, which clearly deviates from journalistic standards: he would, for instance, allow the conversations to follow widely sprawling trajectories of association, or he would throw his interview partners off track by means of abrupt, digressive questions.¹¹ As Forrest explains in the introduction to her English-language reader on Kluge's works: "Kluge's intuitive mode of questioning seeks to animate the conversation partner by igniting the associative and imaginative capacities of his interview partner."¹² On the other hand, some episodes, or segments of episodes, developed into aesthetically complex experiments, such as audiovisual montage essays, combining different kinds of images, texts, and musical traditions. These more experimental segments and episodes tie in with Kluge's late essay films as well as with his literary works. Thus, these

8 In these 'fake interviews,' Kluge and his dialogue partners create, in a particularly entertaining way, an alternative reality between documentary material and fiction. While these episodes are often accompanied, or counteracted, by historical materials, his dialogue partners often take on fictional personalities, or 'regular' interview partners depart on fictional trajectories in order to "trade stories" with Kluge. Kluge in Lutze, "Projekt der Moderne" 24. Kluge explains, by reference to his conversations with Heiner Müller: "Up to 20% of these conversations with Heiner Müller are, in this sense, consciously fictional, meaning that we trade stories. He tells me mine, I tell him his, or we weave a topic together, of which we both know: it would not have existed like that historically, but it would have been lovely if it had." Ibid. (Translation by B.H.)

9 Schulte and Siebers, "Vorwort" 8.

10 Ibid., see also Lutze, "Projekt der Moderne" 29–30 or Schulte, "Television and Obstnacy" 319–20.

11 For more on Kluge's way of leading interviews, see Seeßlen, "Interview/Technik." Seeßlen quotes, among other things, an early newspaper article on the *Kulturmagazine*, in which his interview technique is described as follows: "The way in which this man leads his interviews is unique. Kluge's voice is quiet, but its inflection reveals a sense of curiosity. His technique contradicts everything a regular TV journalist would describe as his skill set: Kluge often poses his questions haltingly, he starts to ramble, leaping from one detail to the next. [...] He never gets to the point." Makowsky in Seeßlen, "Interview/Technik" 131. Which, to Seeßlen, is the point.

12 Forrest, "Editor's Introduction" 18–19.

Kulturmagazine constitute a reservoir of themes, aesthetic forms and experiments, motives, and figures of contemporary history—which return, often fictionalized, in Kluge’s films and texts. At the same time, the TV programs not only cite each other but also and often include passages from Kluge’s literary writings, which are thus newly contextualized and enhanced by means of a new, audiovisual mediality. These intermedial references and relations hold together what Thomas Elsaesser calls “the dada *Gesamtkunstwerk* that is [Kluge’s] oeuvre.”¹³

Kluge’s vast and intermedial oeuvre offers itself up to academic research from all kinds of different disciplinary perspectives. During an early phase of critical reception, and roughly until 1990, engagement with Kluge’s concept of the public, with his theoretical and philosophical works as well as his films was particularly prevalent; then, his TV projects began to attract attention. Since 2000, Kluge has made a reappearance as a literary figure, thus his books, and the intermedial relations between books, films and TV series moved to the forefront in academic engagement. Yet while Kluge’s interdisciplinary work seems to generate diverse perspectives, there is still the challenge of productively and innovatively engaging with the immense scope of his oeuvre. In two international conferences dedicated to Kluge’s work, which took place in Berlin (2012) and Liège (2013),¹⁴ the magnitude of available materials was problematized, and it was concluded that computerized assessment methods and procedures would be relevant in the future to generate innovative forms of analysis. Such a digital approach was tested in an exemplary study of Kluge’s literary works but has not yet been applied to his TV productions.¹⁵

Digital Analysis: Why, and How?

As of yet, research into Kluge’s TV production is rather limited in scope and methodology; it may be diverse, but it is horizontal. What is more, analogous

13 Elsaesser, “Stubborn Persistence” 25.

14 Many of the contributions for these conferences have found their way into the first iteration of the *Alexander Kluge-Jahrbuch (Verteilte Nachrichten, 2014)*, an annual publication dedicated to collecting new and innovative research into Alexander Kluge’s work, which also includes primary texts written by Alexander Kluge, as well as reviews and bibliographies.

15 Martens, “Distant(ly) Reading Alexander Kluge’s Distant Writing.”

to Kluge's relevance within the framework of 'Autorenfilm,' New German Cinema or auteur film, his TV production is often understood as "auteur TV."¹⁶ For that very reason, Kluge's work, or Kluge himself as the auteur, is usually at the center of critical attention. Digital analysis may assist in breaking with such prevalent patterns by allowing for the formulation of new research questions that have yet remained inexpressible while, at the same time, providing an empirical foundation for the hermeneutic tendencies of Kluge-research. The logic of author-driven engagement with Kluge's TV productions may be overcome, and instead of committing solely to topical or character-driven parameters, digital analysis may assist in providing an innovatively interlinked assessment of topics discussed, forms of expression and materials used (e.g., music, text citations, inter-titles), and of people interviewed. The generation of new research questions is, of course, dependent on the quality and quantity of the available information; but it is also, crucially, dependent on the way in which the data is connected. Digital analysis must thus aim at collecting quantitative and qualitative information in a comprehensive and innovatively structured way while allowing for interoperability with other projects.

In this manner, the material base may be widened significantly, and Kluge's TV production may be opened up for research from other disciplines. New research avenues may, for instance, be explored regarding a comprehensive investigation of historical patterns from various disciplinary as well as interdisciplinary angles. Key historical moments may be made traceable and analyzable in variable settings as they are translated not only into (documentary as well as fictionalized) audiovisual representations but also into films and literary works—and vice versa. Digital analysis may thus also open up aesthetic forms and processes to new and innovative research, and questions regarding inter-medial structures and relations may be reformulated and investigated in new and innovative ways. Digital analysis and the interconnectivity with other data sets may allow for future research into intermediality to reconstruct and analyze the processes of migration, media transfer, and metamorphosis that central historical themes and motives go through.

As for the question of 'how,' an important point to stress in advance is the fact that the digital approach that we aim at does not deal with the primary source material itself, i.e., the audiovisual material, but instead with metadata—and metadata needs to be aggregated. In some cases, basic information

16 Lämmle, *Televisuelle Intellektualität* 79.

may be gained from existing descriptions of the primary materials; nevertheless, this process almost always requires manual curation. The task of curating metadata is based on a data model that describes how and to what extent information is collected from the source materials. This data model, in turn, is created based on the main objectives and research questions of a project. For a digital approach to analyze the *Kulturmagazine*, it would seem to be a good starting point to begin by focusing on the people involved and the topics covered. Yet this first step already implies, as mentioned above, curation: to collect this basic data, descriptions must be sifted through, and—in case of missing or lacking description provided—the episodes themselves must be examined, and relevant information extracted on the fly.¹⁷ Building upon this basic set of information, digital methods may then be applied in order to help understand the connections between single episodes or look at the development of certain elements and topics over time, thus providing insights into Kluge's aesthetics as well as his constant confrontation with and transformation of recurring contents. But it also provides us with the foundation for the implementation of more complex parameters that would allow for a more detailed and critical view of these diverse materials.

Going Interdisciplinary in the Digital Realm

One of the first and major tasks for projects in the field of digital humanities¹⁸ is to develop a detailed understanding and a clear picture of the area of study and, therefore, of the kind of data that is produced. Because Alexander Kluge's oeuvre is as encompassing in its extent as it is disparate and widely disseminated through different types of media, this is not an easy task, especially because it is necessary to rely on a complex data model that allows for the interlinking of his materials. Keeping this in mind, it is absolutely feasible that, over time, more and more digital projects on Kluge's work are

17 Machine learning or automatic person recognition is often claimed to automatically extract such information, but in practice, it relies on an already trained corpus—which, in turn, also needs curation—and it does not provide for good data quality.

18 Providing a concise and conclusive definition of 'digital humanities' is a long-term discussion in the field itself, as is partly documented on the website <https://whatisdigitalthumanities.com/>. For a compact overview on the fields that digital humanities can cover, see Schreibman et al., *A New Companion to Digital Humanities*. Or, for more encompassing insights, see Gold et al., *Debates in the Digital Humanities*.

created, such as the one suggested by Martens for the analysis of his literary works.¹⁹ These should, ideally, be interconnectable so that a joint digital ecosystem is created. This ecosystem may, for instance, include written documents that are transcribed and published as digital editions with encodings that highlight references to other projects. There may also be audiovisual materials available on new and/or already existing online platforms, which may be watched and referenced down to single frames. In general, these considerations are crucial for every project that engages with the oeuvre of a producer of creative works.

However, digital projects are not only about collecting and interlinking but also about processing the materials and translating them to data.²⁰ Data, in this context, does not only mean digital copies of works but also, and mainly, contextual information *about* these works. This information may be scaled down to words or even letters, something that linguistic research is interested in. For film studies, on the other hand, it may be relevant to analyze every frame of a movie by Alexander Kluge, which would provide us with information about the inner logic of his aesthetics, e.g., the use of colors, over time. Television studies, on the other hand, may be interested in how the *Kulturmagazine* changed the program scheduling of TV broadcasting stations in Germany.²¹ Each such project would add valuable information for future research and provide new perspectives for approaching and analyzing the work of a prolific producer like Kluge. But how do we connect such existing and future data, and how do we connect it with the research results already available in publications? This question has recently and frequently been discussed in different digital humanities projects as more and more digital resources become available.²² It also hints at the opportunity to improve interdisciplinary approaches as data from different sources and research perspectives are increasingly bound together. With regard to Kluge's *Kulturmagazine*, we would thus propose a digital platform that encourages the critical analysis of Kluge's

19 Martens, "Distant(ly) Reading Alexander Kluge's Distant Writing."

20 On the importance and consequences of this 'data turn' for scholarship, see Borgman, *Big data, Little data, No data* or Edmond, *Digital Technology and the Practices of Humanities Research*.

21 Other interesting digital methods are collected in Fickers et al., *Audiovisual Data in Digital Humanities*.

22 Based on the mass of data that is currently available, the Europe-wide initiative Time Machine proposes to connect this data in a way that allows for us to navigate the past in a simulation that is created out of these connections, <https://www.timemachine.eu/>.

works with the help of methods from different fields, such as musicology, film, television, and media studies.

The focus of this platform's general approach to digital analysis stems, to a large part, from the field of digital television studies. In general, however, television studies is not as present in the digital humanities community as some might suspect,²³ which is probably due to a lack of available data, as most TV broadcasting is under copyright. Much of the materials are stored and hosted by the broadcasting companies themselves, so, at least in theory, there is a lot of data available. Also, private recordings must exist on a large scale. As an example, the Österreichische Mediathek, an Austrian archive for sound recordings and videos,²⁴ holds around 2 million assets of audiovisual heritage, but needs to limit the access to this material due to privacy and copyright issues. Connecting Kluge's *Kulturmagazine* to such a collection would provide valuable contextualization for discourse analysis. Yet, for the reasons outlined above, we do not see a lot of these materials available on digital research platforms.²⁵ In general, it is currently nearly impossible to build an open platform that offers direct access to audiovisual materials that were once broadcast on television. It is required to get permission from the rights holders, which is usually complicated with regard to television productions, as there are so many people and institutions involved. Yet digital researchers have found their own ways of dealing with this issue: as the difficulties of the current situation persist, the safest way is to link to broadcasting archives, where the audiovisual material may be available and access may be granted, and instead have only the metadata stored and analyzed in a research platform.

With regard to Kluge's *Kulturmagazine*, the circumstances are much more fortunate, as much of the audiovisual materials are available on the website of Kluge's production company, dctp, in the form of video streams.²⁶ This

23 While film studies are certainly present in digital humanities societies—e.g. the working group 'film and video' in the German-speaking digital humanities society, <http://dig-hum.de/ag-film-und-video>—the same cannot be said of television studies; there are also not many speakers from the field of television studies at digital humanities conferences.

24 Österreichische Mediathek. <https://www.mediathek.at/>

25 A rare exception would be the CLARIAH Media Suite, which was developed in the Netherlands, but this platform only allows access to the videos for research purposes, <https://mediasuite.clariah.nl/>.

26 dctp: *Das webTV der dctp*. <https://www.dctp.tv/>

website also serves as a good example, illustrating the difference between the collection and presentation of materials, and a representation of said materials in the form of metadata, the latter of which is necessary for a sustainable research process. One may be inclined to argue that to have the primary materials available on a website would be sufficient. Yet while this is certainly a first step, and it may help in our endeavor to the extent that we can reference it; it does not tell us a lot about the content or the aesthetics of these clips, especially not in a data-driven way. Without additional data collection, we cannot point to what is happening in these videos. What is more, even if there *are* descriptions, the vocabulary is not tailored to research. And even if it would be possible for us to intervene, for instance by encoding topic tags, difficulties would arise from the fact that dctp's aim is not research; their interests and perspectives are fundamentally different. And even research-tailored vocabularies may not be compatible with different research approaches.²⁷ Does this mean that we need to create a digital platform for every new approach? No, even though, at times, it may be the best available choice.

This leads us to a crucial aspect that digital research platforms need to be aware of: they must anticipate how their data may be used by others, and they must combine these anticipated scenarios with long-standing experience in how to model data and how to prepare a digital platform to enable connection points for other projects. Additionally, such a platform must be constructed in a way that allows for it to deal with different expectations and their effects on the created data. This is a big issue in the field of digital humanities, which may be summarized in one question: how do we establish interoperability between projects so that the data can be functionally and meaningfully connected?²⁸ Let us try to outline a possible answer in the context of our suggested project.

27 On the history and use of vocabularies—that can be also called taxonomies—and the incompatible development of vocabularies based on different research approaches, see Bay-Cheng et al., *Performance and Media*.

28 This is also an aim of 'linked (open) data,' an enhancement of the World Wide Web infrastructure, which not only works through simple links, but also adds semantic information to the references a link points to. For a brief introduction on how to establish meaningful connections, see Hooland et al., *Linked Data for Libraries, Archives and Museums*.

A Platform for the Digital Analysis of Kluge's TV Works

In order to digitally analyze the audiovisual materials that comprise Kluge's *Kulturmagazine*, a digital platform must be ready at hand. This may be a simple database, but in order to store data in a standardized way and to apply sophisticated digital methods that process this data, an ecosystem of tools must be created. There is a general agreement in the field of digital humanities to call such an ecosystem a digital research platform. Such a platform has to deliver on two fronts: first, it must harvest data, and, second, it must do so in a way that allows for this data to be analyzed. Both aspects need to be tailored to the underlying research questions.

Due to the rise of digital humanities in recent years, an increasing number of such platforms are available nowadays, but there is still no one-size-fits-it-all solution (and there probably never will be). Current projects experiment with techniques to connect single platforms on a more generalized level.²⁹ This is primarily done by applying standardized metadata schemata that data is mapped onto.³⁰ That way, agreements with regard to the interpretation of information are installed, which enables the sharing of knowledge between different research domains and platforms. This is particularly important for analyzing corpora from an interdisciplinary perspective, which is what we aim at with regard to Kluge's oeuvre. Additionally, an approach that is sensitive to metadata sharing gives researchers enough space to express their individual findings while keeping the platform open for further inspection and analysis. A media studies scholar, for instance, may be interested in the audiovisual media practices that are constitutive of the aforementioned 'fake interviews.' Such an analysis, which may focus on camera angles and video editing, could then inform a musicologist, who is interested in how music and sounds are arranged, be it on a narrative, semiotic, or aesthetic level. Instead of letting these different approaches cross-pollinate, separate platforms are often created that only support the respective individual research focus. If both parties agree on the use of a shared metadata scheme, however, they can exchange information without disciplinary restrictions, with the added

29 One example is the Horizon 2020 funded project PARTHENOS, which aims at connecting data collections based on a shared ontology. *PARTHENOS Project*. <http://www.parthenos-project.eu/>

30 One of the most well-known metadata schemas is the Dublin Core Metadata Initiative, which defines a minimal set of often-used data fields, e.g. title and creator. *DCMI*. <https://dublincore.org/>

benefit of flexible integration of future projects, such as, in our example, the analysis of Kluge's films.

The application of an approach based on shared metadata schemata (or, to be more precise, on shared ontologies³¹) creates the possibility of developing platforms that are tailored to the scope and specific needs of particular research projects. Whereas researchers may rely on handy tools, such as spreadsheet editors, to organize data in an easy and concise way, such solutions are limited, especially when it comes to interlinking the entered information. To give an example, some people who are mentioned in episodes of Kluge's *Kulturmagazine* may have frequently occurring names, e.g. Maria Müller. It is more than likely that different people share this name. For the sake of certain kinds of analysis, e.g., a social network analysis, it is necessary for people to be individually and uniquely identified.³² The general solution to such a problem is to apply unique identifiers to each person. If there are two different Maria Müllers mentioned in Kluge's televisual corpus, each is given a different identifier, e.g., MM1 and MM2. Such identifiers are necessary in order to create distinct information, which is required for definitive identification and interlinking.

Going one step further, the application of *shared* unique identifiers helps connect data between different data collections. 'MM1' and 'MM2' would only be a project-specific agreement; in another project, identifiers would certainly be handled differently, thus interlinking the identifiers of the two projects would not be easy. Yet if both projects agree to derive their identifiers from a dedicated identity platform, therefore having the same identifier for the same person, it is an easy task to connect such shared information. In order to do so, there are common authority files where a community collects minimal data to identify entities,³³ giving them a common unique identifier. Well-known authority files for people are GND and VIAF, for places GeoNames, and

31 On the relations between data models, metadata schemas, ontologies and generally on data in the digital humanities, see Flanders et al., *The Shape of Data in the Digital Humanities*. Although modeling of textual data is at the heart of this book, it provides generally valuable insights into the terminology and practices of data modelling.

32 This is called disambiguation and it is often connected to entity recognition, see as an example Foppiano et al., "entity-fishing: a DARIAH entity recognition and disambiguation service."

33 Entities are data sets that form the basic elements of a data model. Such entities are related to each other, forming an entity-relation-model. In digital humanities projects, entities are often persons, places, dates, or concepts.

for all sorts of different data, researchers may rely on Wikipedia (more precisely, Wikidata or DBpedia).³⁴ Using spreadsheets to apply mechanisms like unique identifiers may be possible, but the more complex a data model becomes, the more confusing the spreadsheet will get. Thus, it certainly makes sense to rely on platforms, even though their more complex structure requires technicians to take care of implementation and sustainability issues. The most obvious advantages of a platform, however, are, on the one hand, the obligation to create structured and standardized data,³⁵ which becomes particularly important as soon as more people cooperate on a project, and, on the other hand, the effect it has on data quality, which is a key factor for accurate analyses and the application of more sophisticated digital methods.

Kluge's oeuvre constitutes a prime 'candidate' for such a platform approach. As he uses different media types and formats, a simple index of parts of his works would not allow for the possibility of gathering and analyzing more complex information. Even if the *Kulturmagazine* are described in a very detailed and precise way, it is still crucial to allow for the connection of these descriptions with other, maybe future, data collections that may cover works of different formats or media. If the principle rules are not followed, however, a data silo is created that may be useful for a single project only, implementing barriers for the reusability of the data for other projects. The question is what an interoperable research platform might look like. Most importantly, it constitutes an interface that allows for easy data entry and for the modification of information that is extracted from the researched materials, e.g., the TV episodes in this case.³⁶ At the same time, the extracted data must be formatted and massaged in a strictly standardized way; the underlying rules must be

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- 34 GND (Gemeinsame Normdatei) is the integrated authority file hosted by the German National Library, https://www.dnb.de/EN/Professionell/Standardisierung/GND/gnd_no_de.html. VIAF is the Virtual International Authority File, <https://viaf.org/>. GeoNames is focused on locations, <https://www.geonames.org/>. Wikidata and DBpedia describe entities based on data models contrary to Wikipedia, which is focused on textual description; nevertheless, these three platforms are closely linked, <https://www.wikidata.org/> and <https://wiki.dbpedia.org/>.
- 35 The opposite approach would be minimal computing, which questions common hardware and software considerations and argues for more simplicity. *Minimal Computing*. <http://go-dh.github.io/mincomp/>
- 36 An issue that is often underestimated is the importance of well-thought-out and balanced interfaces that support not only the contributors of data but also the consumers, see Whitelaw, "Generous Interfaces for Digital Cultural Collections."

derived from a data model that follows standardized agreements while also covering the particular specifications of Kluge's *Kulturmagazine*.

Moreover, it is necessary to contemplate and anticipate possible connections with other formats of Kluge's production, or even with the work of other artists. This modelling work necessitates the close collaboration of researchers on Kluge and digital humanities experts from the very beginning so that experiences from both perspectives can be taken into account. In general, the time, resources and expertise it takes to develop the data model for a research platform should not be underestimated. It takes time and plenty of discussion, and it is an iterative process. Without having this kind of expertise accompany the process from the very beginning, uninformed decisions at an early stage tend to have cascading effects, affecting the sustainability and reusability of a platform design. Take, for example, the idea of potentially (in a later phase of analysis) fostering research into sound and music in Kluge's work. If the initial data model is not capable of extending to a musicological perspective, such information cannot be interlinked or added. Either the enrichment of data is made impossible or, even more problematic, the setting of the platform does not allow for such additions, which has an adverse effect on the research project itself and hinders, in this example, cooperation with musicologists. In some respects, the agency of a digital research platform can manipulate the framework of the research project itself,³⁷ which must be kept in mind for the entire process of conceptualizing a digital project.

With regard to the objectives of the research project described in this paper, we consider the development of an ontology tailored to the oeuvre of Kluge as best practice.³⁸ An ontology describes, in a formalized way, the way in which the data model is built, and it defines the points of intersection with more generic ontologies like CIDOC CRM.³⁹ This also allows for adequate documentation so that other researchers get a clear picture of what kind of

37 More elaborate discussions on this topic may be found in Bartscherer et al., *Switching codes*. Interesting remarks on possible consequences are collected in Kim et al., *Disrupting the Digital Humanities*.

38 Recent initiatives do serve to illustrate this point, e.g. *The Swiss Art Research Infrastructure*, <https://swissartresearch.net/> and *Data for History*, <http://dataforhistory.org/>. Such initiatives highlight the necessity to develop advanced digital research platforms that involve an interdisciplinary research community.

39 CIDOC CRM (Conceptual Reference Model) is oriented primarily on the GLAM (Galleries, Libraries, Archives, Museums) sector but is used more and more for all parts of cultural heritage and digital humanities production. *CIDOC CRM*. <http://cidoc-crm.org/>

data to expect and how to integrate their data with what is already there. A generic ontology acts as a broker onto which different research projects may be mapped. As we have mentioned above, it is no longer necessary to define entities, like people or places, over and over again, as there are well-proven conceptual definitions that may be adopted. For the generic parts, it is thus sufficient to take the definitions from a community-agreed ontology. Additional project-specific information, however, must be described specifically for the respective ontology of the project.

The adoption of well-proven conceptual definitions allows for conformity on a basic level, thus preparing data for automatic processing and interlinking. This strategy is called semantic modelling⁴⁰ as it focuses on sharing information instead of data structures. This also includes the integration of shared vocabularies, linked (open) data methods, and technology that releases data to the public via interfaces (e.g. API, semantic querying like SPARQL). Most of these requirements are collected in the acronym of the FAIR data principles, which stands for findable, accessible, interoperable, and reusable.⁴¹ In detail, however, these principles are not only about technological ways to share data, but also about sharing conceptual issues that research projects working with digital platforms need to find answers to. The driving factor to apply the FAIR data principles is the guarantee of a research data life cycle. Data that is created and processed should also be prepared for reuse by others, and it should be preserved long-term in a way that it remains findable, reproducible, and processable in the future. This takes the pressure off the issue of sustainability with regard to the platforms as the data should be self-explanatory, and therefore agnostic, so that it can be reused in different technical frameworks. The only precondition is that standards and community guidelines must be applied as far as possible.

40 Semantic modelling aims at supporting the connection of data from different domains with the help of the semantic web, see Meroño-Peñuela, "Digital Humanities on the Semantic Web."

41 Wilkinson et al., "The FAIR Guiding Principles for Scientific Data Management and Stewardship." The current version of the FAIR data principles is available at: <https://www.go-fair.org/fair-principles/>

Case Study: An Opera Stenograph

As a case study, we have chosen a short but complex clip entitled *Fünf Stunden PARSIFAL in 90 Sekunden* (i.e., *Five hours of PARSIFAL in 90 seconds*), a video that reveals some of the abovementioned intermedial relations and complexities. Providing an exemplary analysis of the relevant parameters of this clip allows us to illustrate some of the potentials for future research as well as challenges of digital analysis in this context.

First, we offer some background information and a brief interpretational framework for this segment. This 90-second clip may be referred to as an “opera stenograph,” as Christian Schulte calls it.⁴² This opera stenograph is part of a particular project that has occupied Kluge since the 1980s, which has spread through all of his preferred forms of expression, i.e., his literary writings, his films, and his TV productions; Kluge himself refers to this project, at times, as an “imaginary guide to opera.”⁴³ It is imaginary because it is not a guide to an existing repertoire of musical theater; instead, Kluge is more interested in possibilities, in missed chances and possible stories suitable to be opera-ized—yet not in a way that would reproduce the tragic finality that Kluge ascribes to ‘traditional’ opera, the quasi-teleological narrative progression⁴⁴ with overdeveloped and exalted passions and emotions. Instead, Kluge tries to infuse these stories, and the emotions that are somehow bound within them, with a new kind of historical experience.⁴⁵ Kluge’s “imaginary opera guide” experiments are conceived of as literary as well as audiovisual counter-projects, as “operas of possibility;”⁴⁶ or, in other words, these counter-projects serve to create spaces in which music, or art as such, may become what Kluge conceives of as historical testimony.

There are many literary manifestations of this opera guide project. One of the most significant ones is called “Götterdämmerung in Wien” (i.e., “Twilight of the Gods in Vienna”), which aims at the deconstruction of Wagner’s opera. Kluge tells the story of how, in March of 1945, Baldur von Schirach, Gauleiter of Vienna, ordered one last performance of *Götterdämmerung*. But then, the

42 Schulte, “Opern-Stenogramme” 49.

43 Kluge, “Erster imaginärer Opernführer.”

44 Tara Forrest also points at the intrinsic connection between Kluge’s challenge to historicist historiography and his challenge to the tragic finality of operatic narratives. Forrest, “Editor’s Introduction” 16.

45 Schulte, “Opern-Stenogramme” 49.

46 *Ibid.*: “Möglichkeits-Opern.” (Translation by B.H.)

opera house in Vienna was bombed and burned down, and the orchestra was dispersed in various shelters. They were connected only by field telephones. Nonetheless, they managed to rehearse and eventually record and film themselves playing fragments of *Götterdämmerung*. Fragments, because, as Kluge writes, they did not “constitute a unified sound [...], the noise of the final battle for Vienna could not be filtered out.”⁴⁷ These fragments were found by Russian soldiers, and through a labyrinth of re-discoveries, they made their way to Paris, where they were played for Jean-Luc Godard. With this literary piece, Kluge’s project is to deconstruct Wagner’s music in order to turn it into historical testimony. Wagner can only be salvaged, Kluge seems to say, by letting him pass through deconstruction and historical emergency, which—as this text illustrates—necessarily leads to the interface between fact and fiction. Yet fact and fiction each remain abstract on their own; they must be constellated in order to create space for a *mélange* of subjective emotional and objective factual worlds.⁴⁸ Testimony can only happen in such a constellation. And Kluge describes his task of creating such testimony as one of calling upon “contemporary history, to document it, and to subjectively revive and magnetize these documents by means of music.”⁴⁹

Five hours of PARSIFAL in 90 seconds is part of this imaginary opera guide project. With this audiovisual opera stenograph, Kluge opens up a space of possibility by ‘documenting’ an opera production that never happened, namely a *Parsifal*-staging by Einar Schleeff—years after the actor-director’s death. While Schleeff did indeed intend to stage *Parsifal*, his plan never came to fruition. Thus, what this video clip effectively does is arrange existing materials in such a way that they tell a story of possibilities at the interface of fact and fiction, of subjective emotional and objective factual worlds. All of these (re-)arranged materials are taken from two other *Kulturmagazine*, in which Kluge interviewed Schleeff.⁵⁰ We see draft drawings of stage scenery, which Schleeff did make, as he did plan on staging *Parsifal*. Yet most of the

47 Kluge, “Götterdämmerung” 67: “Die Orchesterfragmente ergaben keinen einheitlichen Klang [...], die Geräusche des Endkampfes um Wien waren nicht auszufiltern.” (Translation by B.H.)

48 Schulte, “Opern-Stenogramme” 51.

49 Kluge, “Autor im Fernsehen” 22: “das heißt die Zeitgeschichte heranzuziehen, sie zu dokumentieren und diese Dokumente durch Musik wieder subjektiv zu bewegen und zu magnetisieren.” (Translation by B.H.)

50 More precisely, the materials are taken from two episodes: “Endkampf in einer Ritterburg / Einar Schleeff und die Gesangsmaschinen des Parsifal,” *News and Stories*, SAT.1,

images that we see stem from a 1996 staging of Brecht's *Herr Puntila und sein Knecht Matti* (i.e., *Mr. Puntila and his Man Matti*), in which SchleeF was the main protagonist, as well as the director.

Significance, then, is attributed by means of context, reference and aesthetic choice. In his deconstruction of Wagner, Kluge makes the actual *Puntila*-staging pretend to be a *Parsifal*-staging—which never happened. ‘Credibility,’ if you will, is attributed to this Wagner ‘opera of possibility,’ on the one hand, by the very particular montage of the *Puntila*-recording, which is edited to resemble the story of *Parsifal*, revolving around a huge round table. At the same time, the *Puntila*-recording is projected into the vertical plan of what may be interpreted as an opera house⁵¹ but is actually a planetarium, which is recognizable as such due to the distinctive planetarium projector at the center of the image in combination with the characteristic dome of the building.⁵² Around it, there is a dynamic starry sky, one of Kluge's favorite motives, to illustrate and problematize the notion of enclosedness from the outside: inside, there is an enclosed projection of stars, outside the limitless starry sky. This complex relation of enclosedness and openness also plays out with regard to time: the most significant aesthetic choice in this clip is clearly the time lapse, or, as Kluge calls it, “Zeittotale,” a temporal long shot, which is ‘responsible’ for the eternal opera's being condensed to 90 seconds. However, the most significant strategy of ‘fake-authenticating’ the video as a *Parsifal*-staging is the musical track: Wagner's music remains largely unaltered in this video as we listen to a passage from the second act, the prelude to “Die Zeit ist da.”⁵³ Against this background, it would thus be particularly interesting to trace the function of Wagner's music throughout Kluge's “imaginary opera guide” project in order to find out more about music's potential of subjectively reviving and magnetizing historical documents, as Kluge puts it.

Now, the question is how to make such relations traceable in digital analysis. Based on what we have outlined above with regard to the role of digital platforms for research, this case acts as a good example for outlining how such platforms may be connected in a beneficial way. For one, this ‘opera stenograph’ is adapted and reused by Kluge in various different ways

26.06.1995, and “Herr Puntila und seine Tochter Eva / Einar SchleeF inszeniert Bert Brecht am Berliner Ensemble in ungewöhnlicher Weise,” *10 vor 11*, RTL, 17.06.1996.

51 Schulte, “Opern-Stenogramme” 53.

52 Many thanks to Johann Lurf for pointing this out to us, and for even sending us images of Zeiss planetarium projectors for comparison.

53 Schulte, “Opern-Stenogramme” 53.

throughout the *Kulturmagazine* and other works; thus it would be interesting to find traces of this process of transformative reiteration. Information with regard to the context of the audiovisual materials, as compared to other manifestations, may provide additional assistance in understanding the way in which Kluge uses these materials within and between different media settings. With the help of shared ontologies and vocabularies, one could identify as many references to these materials as are available on different platforms and databases.⁵⁴

A first step would still have to be the collection of basic metadata and the creation of an 'aesthetic vocabulary' specific to Kluge's TV works. As the clip illustrates, there is usually only a relatively limited repertoire of aesthetic techniques and procedures that Kluge makes use of, and at times Kluge himself, or secondary literature about Kluge, has assigned specific names or labels to describe these projects, techniques and procedures, such as Kluge's "Zeittotale," or the imaginary opera guide. Establishing such a limited vocabulary specific to Kluge's TV aesthetic would make it more feasible of a task to gather the relevant data from the episodes, and it would assist users in tracing certain particularities within the intermedial 'Kluge-universe.' References may be defined within this universe, e.g., to other *Kulturmagazine*, but also, by means of shared ontologies and vocabularies, with 'outside' data sets that would provide, say, metadata about Wagner's "Die Zeit ist da," or about Einar Schleeff and his theater production.

If a musicology database were to provide information about the attributed effect of music, possibly in combination with further co-references on the usage of this music in objects of cultural heritage, like theater performances, it would be possible to juxtapose this information in a virtual research environment in order to get fresh insights about contexts and possible new ways of interpretation.⁵⁵ Tracing the use of recurring topics, projects, songs, people, motives, techniques, etc., is an advanced digital method that holds enormous potential for research, but it relies on the digital availability of the

54 This could assist in bringing together projects that are in different states of maintenance, such as the Kluge Digital Resource, <https://kluge.freizo.org/>, or clips and lectures by and about Alexander Kluge on the website of Christian Schulte's *Passagen*-project at the University of Vienna, <https://passagen.univie.ac.at/>.

55 The research project *Telling Sounds* has the potential of providing such insights if material on Kluge were to be processed on their research platform. <https://www.mdw.ac.at/imi/tellingsounds/?l=en>

data—and on a common agreement as to how to connect it. Shared ontologies, defined by a research community, represent a big step forward for such a digital research approach. That way, new interdisciplinary perspectives may be developed on tangible and intangible objects of cultural heritage, as well as their reuse, re-mixing and remediation—and for these processes in particular, Kluge's oeuvre constitutes an excellent starting point for further investigation. In this context, the aim of an advanced and forward-looking digital research project should be to illustrate relations and interconnections between people, ideas, etc., and to investigate cultural techniques that establish new contexts—even if it may take some time to create fruitful collaborative settings and gather all the necessary technological and conceptual puzzle pieces together in order to undertake such a challenge.

Prospect

In this paper, we have delved into the potentials and challenges of digital analysis in the context of an encompassing, diverse and intermedial oeuvre of works, with the main objective of fostering new forms of interdisciplinary research. In doing so, we have focused on Alexander Kluge's televisual corpus, i.e., the so-called *Kulturmagazine*, in the context of which an exhaustive, metadata-based survey of these audiovisual materials in the form of a digital platform would seem to be the most promising digital approach. Yet in order to make an intermedial oeuvre like Kluge's attractive, accessible, and researchable for scholars from a broad range of different fields, it is essential to provide for the interconnectivity of the gathered data from the outset. Reflecting on such a digital approach based on the FAIR data principles with regard to the *Kulturmagazine*, we have identified a set of parameters and guidelines, such as shared ontologies and vocabularies, the development of advanced research platforms and ecosystems, as well as the deliberate and anticipative planning of interdisciplinary interfaces. For the sake of effective and fruitful collaboration between disciplines as diverse as musicology, film, television and media studies, contemporary and cultural history, political or social studies, we offer these guidelines as a starting point for future collaboration, and we would urge prospective digital projects with similar interests to adopt and adapt these guidelines.

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