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Techno-imagining Flusser

This paper is a personal statement and a call out to Flusser scholars all over the world. Maybe we can fulfil the dream of creating a Flusser research environment that not only spreads his message, but also enables us to engage in relevant dialogues. Maybe it is about time to realise this dream technically because now there are very promising state-of-the-art free and open source collaborative collection management and authoring tools as bases. Driven by my own experience of struggling with the large scope and complexity of Flusser's work, this short statement is also about creating order by delineating information, and about accepting the challenge to practice the "new *Einbildungskraft*".[1]

Given the extent of digitization of the Vilém Flusser archival material[2] and also its up-to-date online presentation by *Flusser Brasil*, maybe the time is ripe to rebuild a "hypertext structure" that organizes commentaries and explanatory annotations with Flusser's work at its centre (Wingert 1992: 137-138). Doing so could fulfil the long-standing wish to "[make] the Vilém Flusser archive publicly available as a crosslinked intermedia collection […] establishing a network structure, which supports research as a process of connective acting"[3] (Röller 2001: 1).

Flashback to the initial impulse

About ten years ago, my study of communication science seemed to be finally making sense,

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[1] Back in the late 1970s, Flusser introduces the term "techno imagination". It is "capacity for the imagining of concepts, and the corresponding capacity to decipher images of concepts" (Flusser undated: 152, cp. Flusser 1998: 209). Later on, in about 1990, Flusser prefers referring to Immanuel Kant by using the notion of a "new *Einbildungskraft*", new insofar as it is "konkretisierend, projizierend" [substantiated, projected, SW] (Flusser 1996), which is different than the abstracting gesture of the traditional imagination.

[2] As part of the cooperation between the Pontifícia Católica de São Paulo (PUC-SP) and the Vilém Flusser Archive at the Universität der Künste Berlin Flusser's manuscripts and correspondences were entirely digitized in 2012 (cf. flusser-archive.org, Mirrored archive in São Paulo).

[3] Wissenschaftler, Künstler und Informatiker arbeiten daran, das Vilém_Flusser_Archiv (KHM Köln) als vernetzte intermediale Sammlung zugänglich zu machen." "Die an der KHM Köln eingerichtete Forschungsstelle des Flusser-Archivs wird eine Netzwerkstruktur schaffen, die Forschung als einen Prozess konnektiven Handelns unterstützt." [Scholars, artists and IT specialists are working together in order to make the Vilém Flusser archive publicly available as a crosslinked intermedia collection […] establishing a network structure, which supports research as a process of connective acting, SW] (Röller 2001).

thanks to an advanced seminar, *Kommunikation und Kultur (Vilém Flusser)*, being given by my later doctoral advisor Hermann Haarmann. The role of communicative codes in Flusser's writing about the *Mutation in Human Relations*[4] immediately caught my attention. It all started with a seminar presentation, which accompanied me to my final M.A. examinations and continued occupying me during my years working in business. For about five years now, I have been doing doctoral research on Flusser.[5] My dissertation is anchored in Flusser's pseudo-historical narrative of an epochal media evolution model[6] to explore the processes of transformation of communication structures with regard to Weltanschauung and self-image. In doing so, my research takes up one of Flusser's leitmotifs by increasing the awareness for the potential of new forms of recognition, reasoning and responsibility.

Gründlichkeit: Aiming for a Comprehensive View

My ambitions to engage in *Gründlichkeit* with regard to Flusser's work were soon thwarted by the extensive range of Flusser's writings. One way to frame the scope of research is certainly to focus on some of the main opuses. However, there did not seem to be any consensus on what were actually Flusser's major works, and even if there was, it would still encompass a very broad range.[7] In their 2011 introduction to Flusser, Anke Finger, Gustavo Bernardo and Rainer Guldin offer a selection of fifteen works as Flusser's most significant texts (Finger et al. 2011: xx-xxvi).[8]

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[4] Flusser wrote three versions of this book (in German, English and French). The typescripts can all be found in Berlin. The German version of this book was posthumously published as *Umbruch der menschlichen Beziehungen?* in *Kommunikologie* (Flusser 1998).

[5] During this time I have been appreciating the pleasure of dialoguing with many Flusser scholars, not least because I had the honour of co-organising two international Flusser symposia (Natal 2012, Berlin 2014) and also of co-editing the conference proceedings (*Vom Begriff zum Bild* [From Concept to Image] 2013 and *Play it again, Vilém! Medien und Spiel im Anschluss an Vilém Flusser* [Media and Game following Vilém Flusser] 2015) with Michael Hanke and Hermann Haarmann.

[6] This narrative appears throughout Flusser's oeuvre. Interestingly enough, Flusser critically reflects this "pseudohistorical method" (Flusser 2006: 53) from the very beginning of his creative work, e.g., in the first sentences of *Das Zwanzigste Jahrhundert* [The Twentieth Century, SW] (Flusser 1957) or as cited in *Die Geschichte des Teufels* [*The history of the devil*]. Also the most popular version of the "model of cultural history" – in Flusser's 1985 book *Ins Universum der technischen Bilder* [*Into the Universe of Technical Images*] – comes with the explanation: "The intention of the model suggested here is obviously not to diagram cultural history. That would be an absurdly naive undertaking. Rather the model is intended to focus attention on the steps that lead from one level to another." (Flusser 2011:7).

[7] However, the growing range of scholars with ambitions to (nearly) exhaustively study Flusser sources, for example Rainer Guldin (Guldin 2005), Silvia Wagnermaier and Siegfried Zielinski (Flusser 2009), Marcel René Marburger (Marburger 2011), Guido Bröckling (Bröckling 2012) as well as Andreas Ströhl (Ströhl 2013) list a rather extensive selected biography, certainly with overlaps, which are yet to be identified.

[8] Finger, Bernardo and Guldin list Língua e realidade [Language and Reality], The History of the Devil, Posthistory, Toward a Philosophy of Photography, Into the Universe of Technical Images, Does Writing Have a Future?,

The following photograph of one of my bookshelves shows my printed, primary and mostly German Flusser material collection, which was in large part supplied by antiquarian booksellers. Maybe this ironically illustrates what Peter Sloterdijk recently pointed out about questioning philosophical ambitions, which are supposed to lead to enlightenment and which perhaps instead only lead to full libraries (Sloterdijk 2009: 25). But it may also illustrate the distribution of Flusser's book publications during his lifetime and the preponderance of posthumous publications, which Silvia Wagnermaier estimated to be at a ratio of one third to two thirds (Wagnermaier 2009: 274).

This printed material collection is supplemented by two e-books[9] and over 100 stored digital documents from publicly available online sources. To organize this volume of material, the current state of my study of Flusser sources is still being completely transferred into a reference management and knowledge organization tool[10] and its data are about to be visually arranged by

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Vampyrotheutis infernalis, Angenommen: eine Szenenfolge [Supposed: A Succession of Scenes], Gesten: Versuch einer Phänomenologie [Gestures: Attempt toward a Phenomenology], Bodenlos: eine philosophische Autobiographie [Rootless: A Philosophical Autobiography], The Shape of Things: A Philosophy of Design, Brasilien oder die Suche nach dem neuen Menschen: Für eine Philosophie der Unterentwicklung [Brazil or the Search for a New Human], Jude sein: Essays, Briefe, Fiktionen [Being Jewish: Essays, Letters, Fictions], Vom Subjekt zum Projekt: Menschwerdung [From Subject to Project: On Becoming Human] and Kommunikologie [Communicology] (Finger et al. 2011: xx-xxvi).

[9] *Kommunikologie* (Flusser 1998) and *Kommunikologie weiter denken* (Flusser 2009).

[10] After a limited research, I decided to go for *Citavi*. Though it is a proprietary software program for Windows, it offers several export options of the data base and a free version (citavi.com)

years of creation and publication, publication form and languages of composition. Still very much a work in progress.

Pattern recognition and the struggle with complexity

It is quite clear that this extensive range of sources is overwhelming, as it leads to information overload and creates a pressing need to reduce the resulting complexity. One of the present basic archival source aids at the Vilém Flusser Archive is a keyword index that marks the first attempt at establishing order among the literary remains. Among others, Edith Flusser, Vera Schwamborn and Flusser's son, Miguel Flusser, extended this index in the years immediately after Flusser's death. This work was part of the network *Supposé/Angenommen*, an initiative founded by the inner circle around Vilém Flusser to preserve and develop his work (Kraft 1992: 17). The database printout as of 1994 contains 172 thematically grouped keywords referencing 3,228 essays, a promising groundwork for a future semantic database and for a collaborative research environment, including archival collection management. In addition, thanks to the data visualization of this information, we can discern patterns and important connections to various research perspectives.
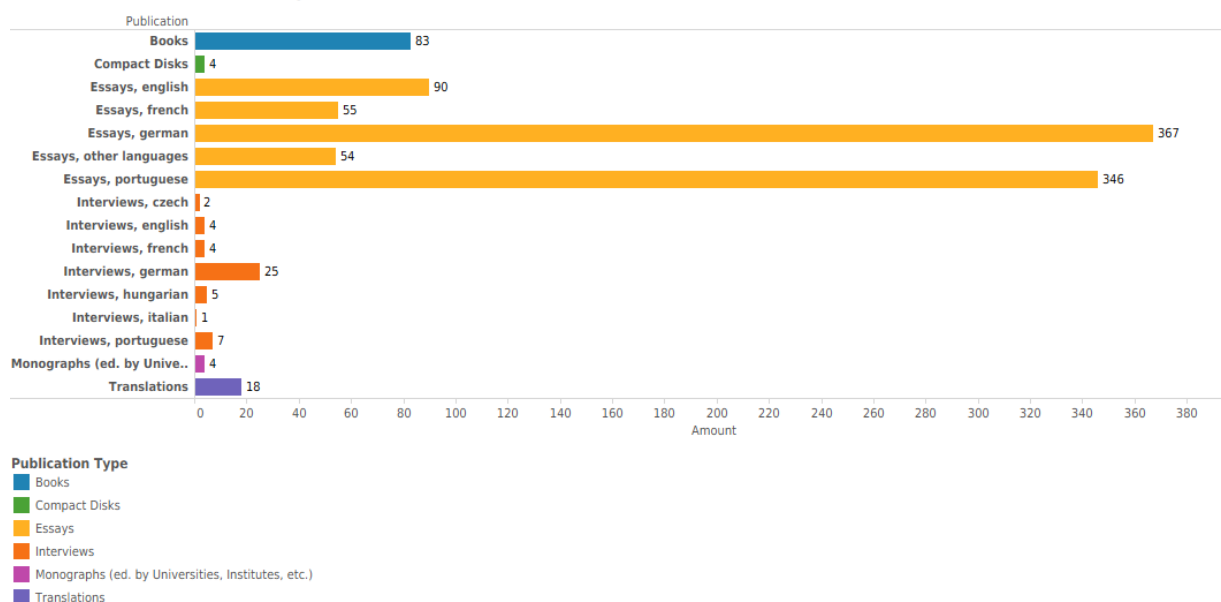
Another way of establishing an overview on Flusser's work is Klaus Sander's yet unpublished *Flusser-Quellen* [Flusser Sources, SW] (Sander 2002): This annotated bibliography of Vilém Flusser's publications from 1960-2002 is a precious gem for any Flusser scholar and in itself an invaluable source. It contains 1,070 titles with intricate publication data. A compilation of the quantities of the main category level of this bibliography is the basis for the following data visualization[11]. It is a first attempt to illustrate the range of Flusser's publications.

Klaus Sander's commented bibliography is filled with publication data: dates of origination, primary publications, editions and reissues, as well as cross-references to translations and contents. Since it lists unmodified, modified, as well as translated reissues, the mere quantity may at first seem confusing. Yet this visualization may nevertheless illustrate the distribution ratio of Flusser's publication types. It certainly draws attention to yet another important aspect of Flusser's work, namely, the range of published essays amounting to 912 altogether.

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[11] The following visual representations of compiled data were created with the data visualization tool *Tableau*, which offers a free version and supports online embedding (tableau.com). For a slightly outdated overview on the range of tools for data visualization as of 2014 see also creativebloq.com/design-tools/data-visualization).

Without doubt, Klaus Sander's Flusser Sources offer a great potential for transferring all information to a collection management tool. Transferring the cross references to a reference management data base could serve to "create a grid or multilevel visualization of how Flusser's texts and concepts interact with and refer to each other", as originally intended for the Flusser introduction by Finger, Bernardo and Guldin (Finger et al. 2011: xix).

Flusser Sources (1960-2002) by Klaus Sander

Publication

Type	Amount
Books	83
Compact Disks	4
Essays, english	90
Essays, french	55
Essays, german	367
Essays, other languages	54
Essays, portuguese	346
Interviews, czech	2
Interviews, english	4
Interviews, french	4
Interviews, german	25
Interviews, hungarian	5
Interviews, italian	1
Interviews, portuguese	7
Monographs (ed. by Unive..	4
Translations	18

Publication Type
- Books
- Compact Disks
- Essays
- Interviews
- Monographs (ed. by Universities, Institutes, etc.)
- Translations

The following tree map visualization of the stock[12], supplied by the Vilém Flusser archive at the Berlin University of the Arts, allows numerous new insights and an overview. It shows that the archival material reaches far beyond the range of Flusser's published sources and is thus a motivation for further Flusser research. The comprehensive correspondence is to a large extent assigned to individual persons, (e.g. Milton Vargas, Dora Ferreira da Silva, Sergio Rouanet, Alex Bloch, David Flusser, Abraham Moles and many more), as well as to groups of people sorted by languages (e.g. publishers). Apart from that the project dossiers „São Paulo Bienal" and „Casa da cor" as well as all the courses documents could be of interest to scholars. Admittedly, this chart type almost hides the relatively small number of the archival stock, such as book publications on Flusser, the collected Flusser video files, the submitted yet unpublished works on Flusser, the two

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[12] Compiled by Daniel Irrgang, the present scientific supervisor of the Vilém Flusser archive, as of 2015, in connection with our joint efforts for a collaborative research environment including archival collection management.

digital artifacts *Die Schrift*[13] and the *Flusser Hypertext*.[14] Add to this seven presorted bundles of archival material yet to be quantified.
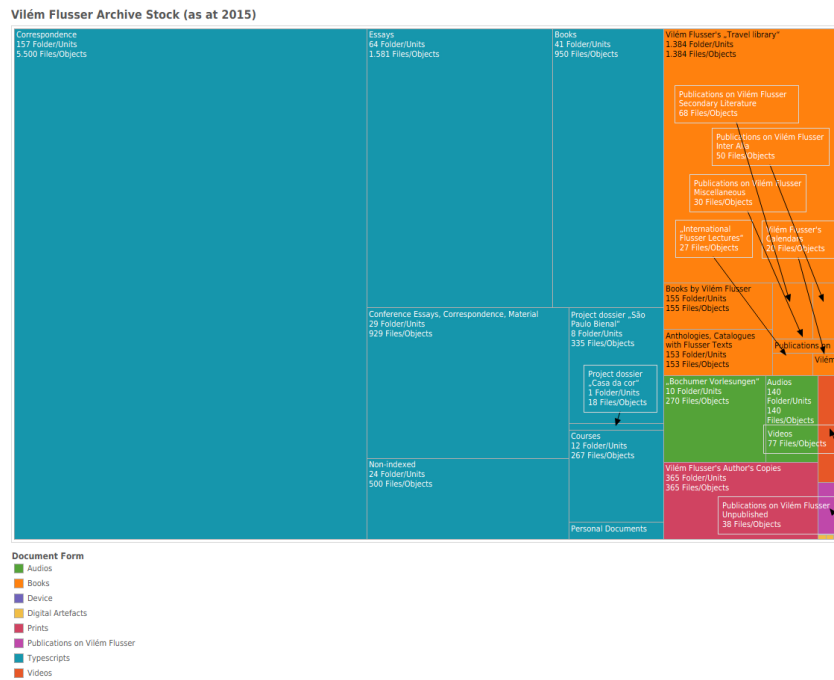
This type of visualization chart offers a more intuitive description of the amount of document types and categories that are held at the Berlin Vilém Flusser archive. It also illustrates the degree of present digitization: different document types, audio, video and most notably all typescripts, are now in digital format.

Community as treasure-map

My first database encompassed the results of a variety of online search engines or catalogues, leading to various outlines of Flusser's life, work and reception. I wanted to get an overall impression of everything Flusser ever wrote, said or published. Besides the Vilém Flusser Archive, which looks after Flusser's textual universe since 1998, Flusser Studies, Flusser Files, and

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[13] Resulting from a cooperation between the Vilém Flusser archive and the Institute for Computer Science at the University of Freiburg, the emulation is presented online at http://hdl.handle.net/11270/767f2c0b-cce6-4623-8caf-f5a890afcb75.

[14] Another outcome of the cooperation between the Vilém Flusser archive and the Institute for Computer Science at the University of Freiburg is a demo of the emulation presented online at http://bw-fla.uni-freiburg.de/demo-flusser.html, the emulation is at http://hdl.handle.net/11270/2b87de90-37dc-4d66-a9e6-546a80b0b261.

more recently Flusser Brasil and Flusser Estudios have done and continue to do a lot to carefully preserve and spread Flusser's thinking. The *Vilém Flusser Archive* offers news on events and publications, lists of the archival stock and information about several cooperation projects, such as the current exhibition *Without Firm Ground – Vilém Flusser and the Arts*, the *Flusseriana*, the *International Flusser Lectures*, the *Flusser Hypertext*, the DVD *We shall survive in the memory of others* and the *Flusser Stream* of the *Bochum Lectures*. The *Flusser Files* offer a personal introduction and several linked lists of Flusser's books, audio and video files as well as texts, which are accessible online. Flusser's essays and course typescripts in Portuguese, German and English have recently been made available on a large scale by *Flusser Brasil*. In addition to this, *Edition Flusser* published by European Photography, the *Biblioteca Flusseriana* published by the Brazilian editor AnnaBlume, as well as the Flusser sites at Monoskop and Wikipedia must be acknowledged. All of this shows a great international commitment to the dissemination of Flusser's thinking. These nodes in the World Wide Web represent a treasure map of sorts.
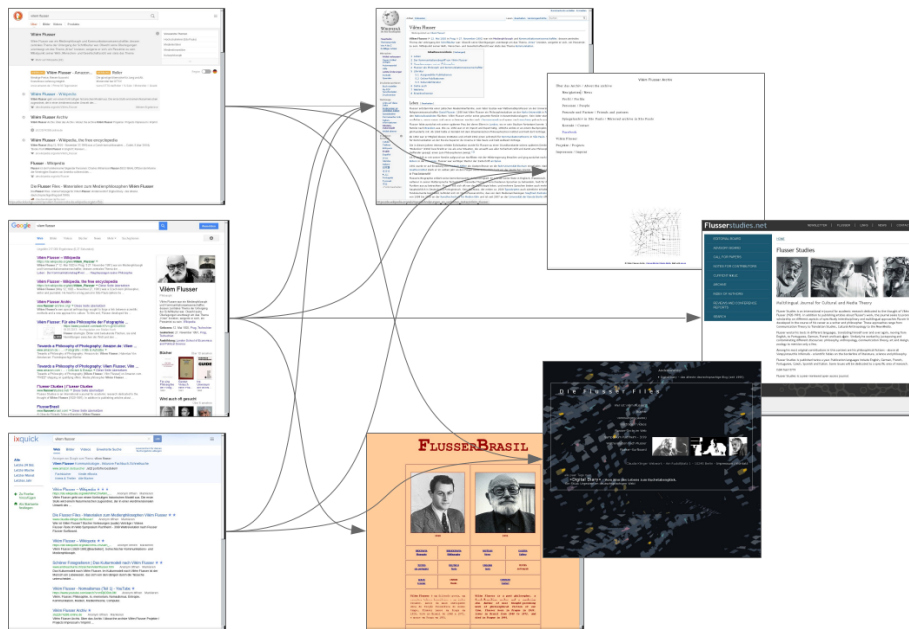
An example of three search-engine results show the dispersion of current links to the top five: the Wikipedia Flusser Site, the Vilém Flusser Archive, Flusser Studies, Flusser Files and Flusser Brasil (see illustration above).

By experimenting with this kind of visualization the question of cross-references arose

showing another dispersion pattern of one- and bi-directional links between the slightly extended choice of the Flusser sites at Monoskop and Wikipedia, as well as the Vilém Flusser Archive, Flusser Studies, Flusser Files, Flusser Brasil and Flusser Estudios (see illustration below).
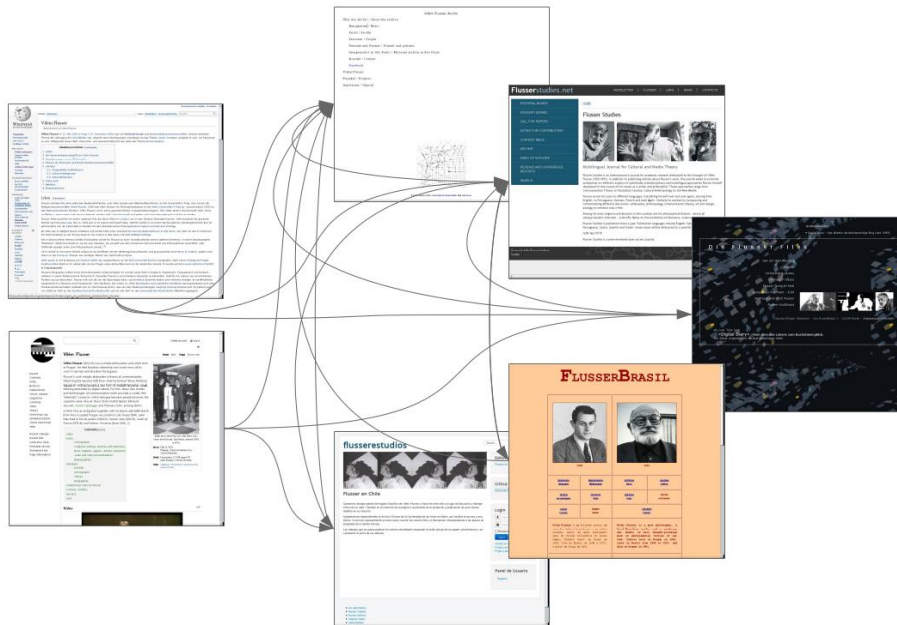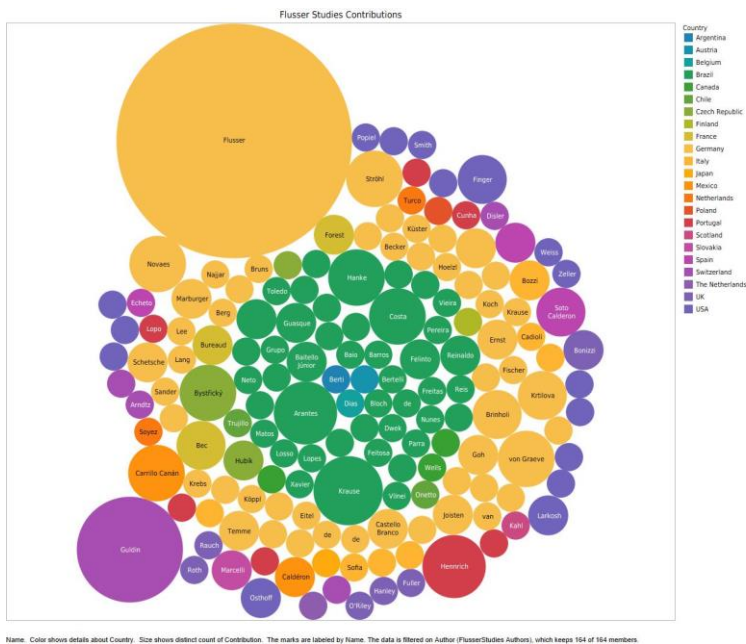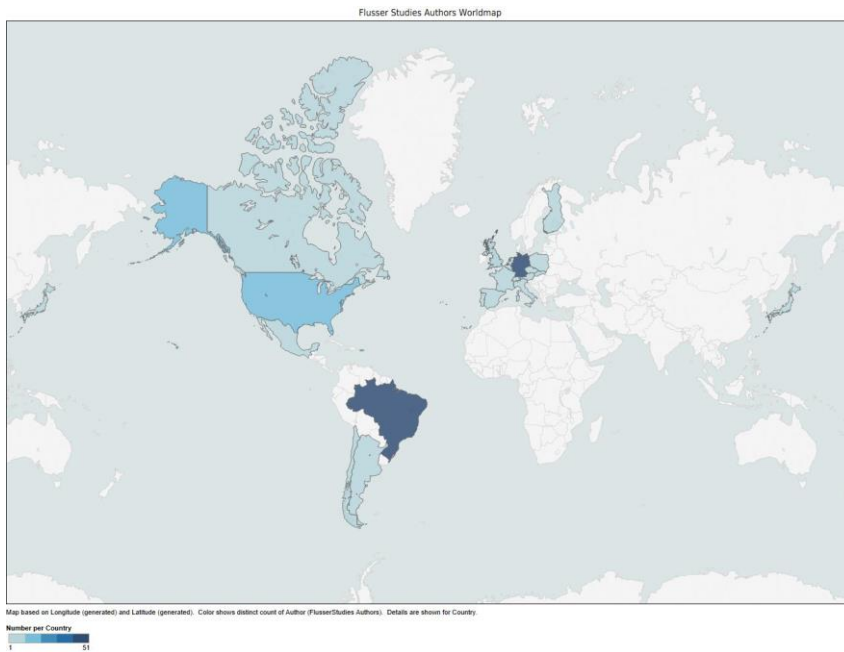

The perception of cross references and repetitions triggered my interest in an orderly view of the whole the Flusser research community. In conjunction with the tenth anniversary of *Flusser Studies*, I compiled data on its contributions, contributors and their locations (see the following three illustrations), which can be found online in the index of authors[15]. This resulted in different views of the community of *Flusser Studies* contributors. The saturated colouring of two countries, Brazil and Germany[16], clearly stand out. Brazil as Flusser's residence from 1940-1972 and Germany as the publishing centre of Flusser during his wave of success following *Für eine Philosophie der Fotografie* [*Towards a Philosophy of Photography*] in 1983 (Wagnermaier 2009: 253-256). It may be tempting to interpret these two global concentrations of Flusser reception as greater than the rest of all *Flusser Studies* contributions.

However, this world map fails to illustrate the astonishing heterogeneity of *Flusser Studies* contributors. This can be shown by translating the geographical information from a world map

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[15] The spreadsheets can be made available to any interested scholar. All visualizations are open for amendments, enhancements and reshaping.
[16] As the Berlin Vilém Flusser Archive holds the unpublished works of Vilém Flusser, which have to some extent been published in *Flusser Studies*, Germany is in this case attributed to the contributions by Flusser

into a colour spectrum arranged by countries. Here the size of the bubbles correlates with the volume of contributions. To boost the visibility of as many authors as possible the data capture has filtered Flusser out, simply because the amount of Flusser's writings is by far the most extensive. This outcome shows that *Flusser Studies* is also a valuable source for unpublished Flusser typescripts. Still another view shows a tendency towards more contributions over the past ten years (in so far 19 issues), and towards more contributors per issue. This may serve as an indication of the growing research interest in Flusser during the past decade.

Flusser Studies Authors Worldmap

Map based on Longitude (generated) and Latitude (generated). Color shows distinct count of Author (FlusserStudies Authors). Details are shown for Country.
Number per Country
1   51

Flusser Studies Contributions

Name. Color shows details about Country. Size shows distinct count of Contribution. The marks are labeled by Name. The data is filtered on Author (FlusserStudies Authors), which keeps 164 of 164 members.

Flusser Studies Contributions 2005-2015

Count of Contribution for each Publication Quarter broken down by Publication Year. Color shows details about Issue. Size shows distinct count of Author (FlusserStudies Authors). The data is filtered on Author (FlusserStudies Authors), which keeps 165 of 165 members. The view is filtered on Publication Year, which excludes Null.

Projecting future research scenarios

A dialogue on Flusser's work by means of state-of-the-art collaborative authoring tools could go far beyond visualizations of mere quantities, though these definitely provide a first insight and overview, which can be updated with new publications or archival findings. However, compiling semantic data and thus establishing another way of accessing the complexity of Flusser's work would be even more compelling.

Still, the basis for a desirable Flusser research environment would involve creating an archival database that enables management and maybe publication of the digitized material. For this purpose, free and open source tools are available, which allow collaborative metadata management, workflow management, as well as export options to relevant online databases or catalogues.[17] At present, there are already free and open source tools available, which offer collaborative editing of applied Optical Character Recognition (OCR) of the scanned text documents.[18]

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[17] A platform-independent example of such a free and open source software suite is *Goobi Digital Library Modules* (goobi.org).

[18] Such as implemented in the Hybrid Publishing Consortium's *A-machine* software ecology (a-machine.com, see also

Moreover, there is a good chance of establishing a collaborative research environment such as an authoring and publishing platform that enables users to enrich the archival Flusser sources with their own writing, semantic annotations.[19] Maybe this allows also for user-generated content such as "thesauri", "classification systems", "indexing tags", "collaborative filtering" and "folksonomy-based recommender systems", recently suggested as "collaborative information services" of "knowledge representation and information retrieval" (Peters 2009).

Such screen-based interfaces may tie in with Flusser's understanding of "techno imagination". According to Flusser, a "new idea of freedom […] is in the technical images" (Flusser 2010: 31). The concrete potential of this new freedom lies in creation of connections that actively respond to the dialogues arising from the network of interrelated nodes. (Flusser 1992: 253). These new forms of computer-generated "technical images" require our collaborative *Einbildungskraft* and an open infrastructure. Can you techno-imagine?

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[19] For instance, the free, open source authoring and publishing platform Scalar (scalar.usc.edu).

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