

Materiality and Montage: Film Archives and the Visualization of Time-Based Media

Adelheid Heftberger
University of Innsbruck &
Austrian Film Museum

**Or:
From Microstructure to
Macrostructure**

**Or:
from Dziga Vertov to
On Broadway**

Metadata

WHEN *PICTURES* CARRY THE WEIGHT OF CLARITY IN A SCENE, THEY FREE WORDS TO EXPLORE A WIDER AREA.



Scott McCloud: Understanding Comics

**Every two minutes we now take as
many photographs as were taken
during the entire 19th century.**

(Jeffrey Schnapp)

I estimate that there have been 2.7 billion videos uploaded to YouTube since 2005. 400 hours of video are added to the site every minute.

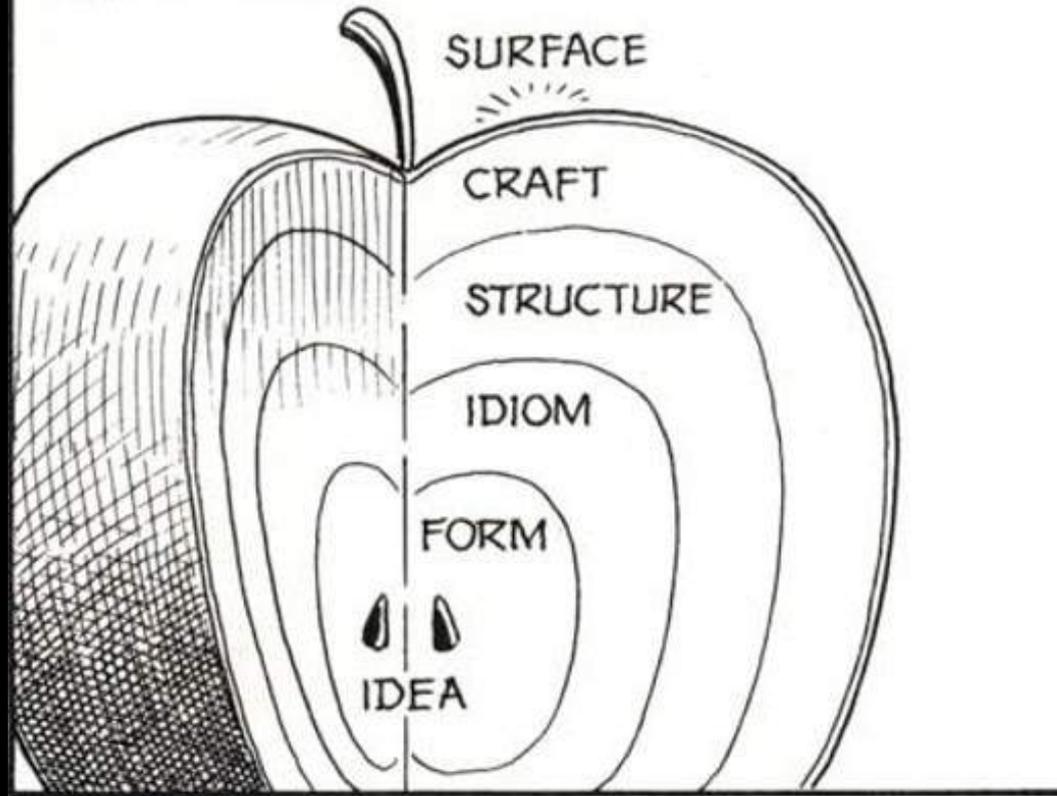
(Luke Mc Kernan)

**We need similar techniques which
would allow us to observe vast
“media universes” and quickly detect
all interesting patterns.**

(Lev Manovich)

Visualization

IN ALL THE ARTS IT'S THE *SURFACE* THAT PEOPLE APPRECIATE MOST *EASILY*, LIKE AN *APPLE* CHOSEN FOR ITS *SHINY SKIN*.



Scott McCloud: Understanding Comics

Digital Formalism (2007-2010)

The screenshot displays the Anvil 4.7.0 annotation software interface. The top left pane shows a video player with a film still of a factory interior. The top right pane displays a 'Track: Duplicates.Near Duplicates' panel with attributes like 'Motivtyp: Spindel_waagrecht'. The main area is a complex timeline grid with columns for 'Types of Shots' and rows for 'Duplicates', 'Material', 'Text', 'Object Motion', 'Camera Movement', 'Optical Perspective', 'Time Manipulation', 'Masking', and 'Interpretative Tracks'. The timeline shows various annotations such as 'Near Duplicates', 'Intertextual Duplicates', 'Diegetic Text', and 'Low An...'.

Annotation Software, developed 2003 by Michael Kipp

Film Style is a film's systematic and significant use of techniques of the medium.

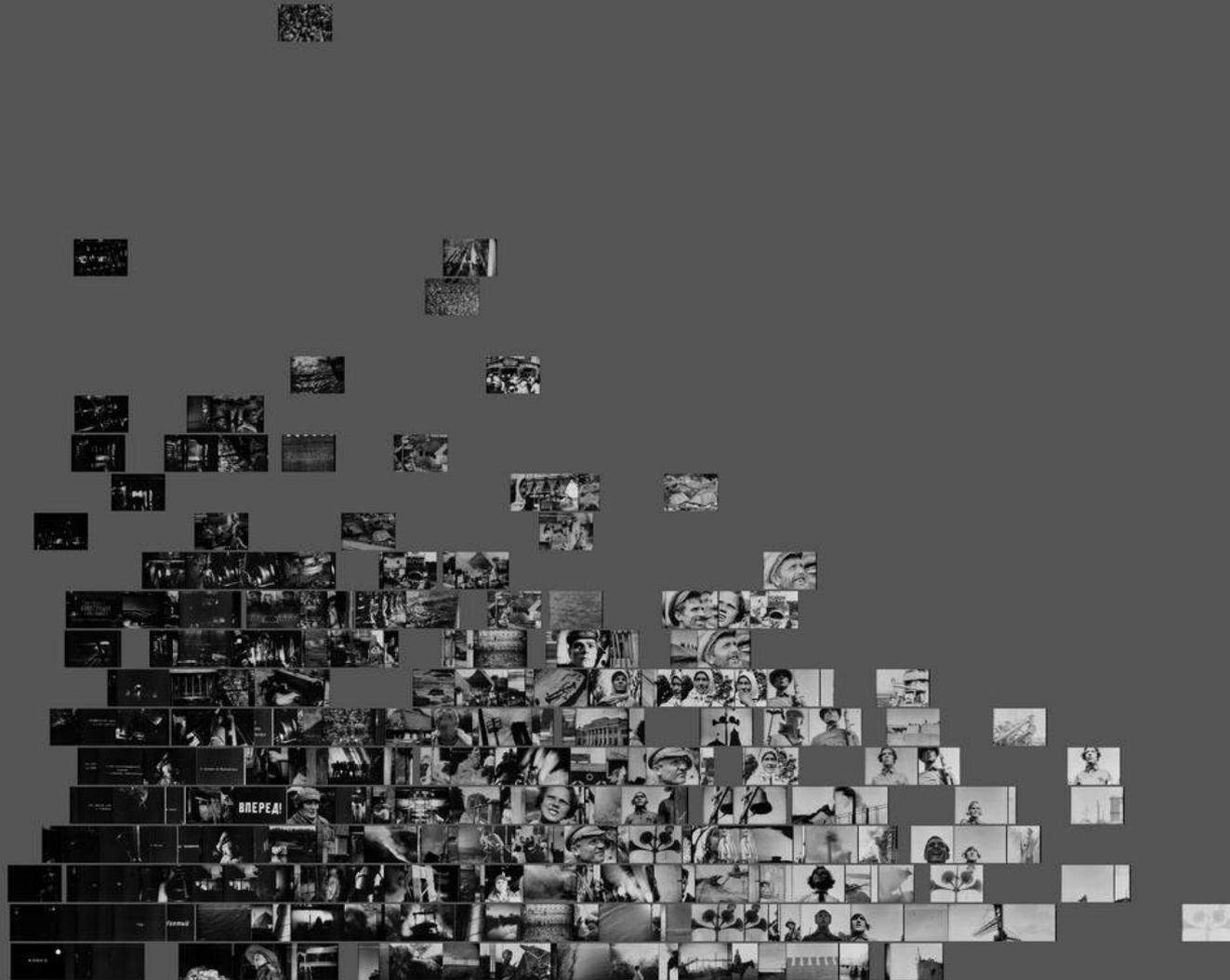
Film studies, it seems to me, is an effort to understand films and the processes through which they're made and consumed.

(David Bordwell)

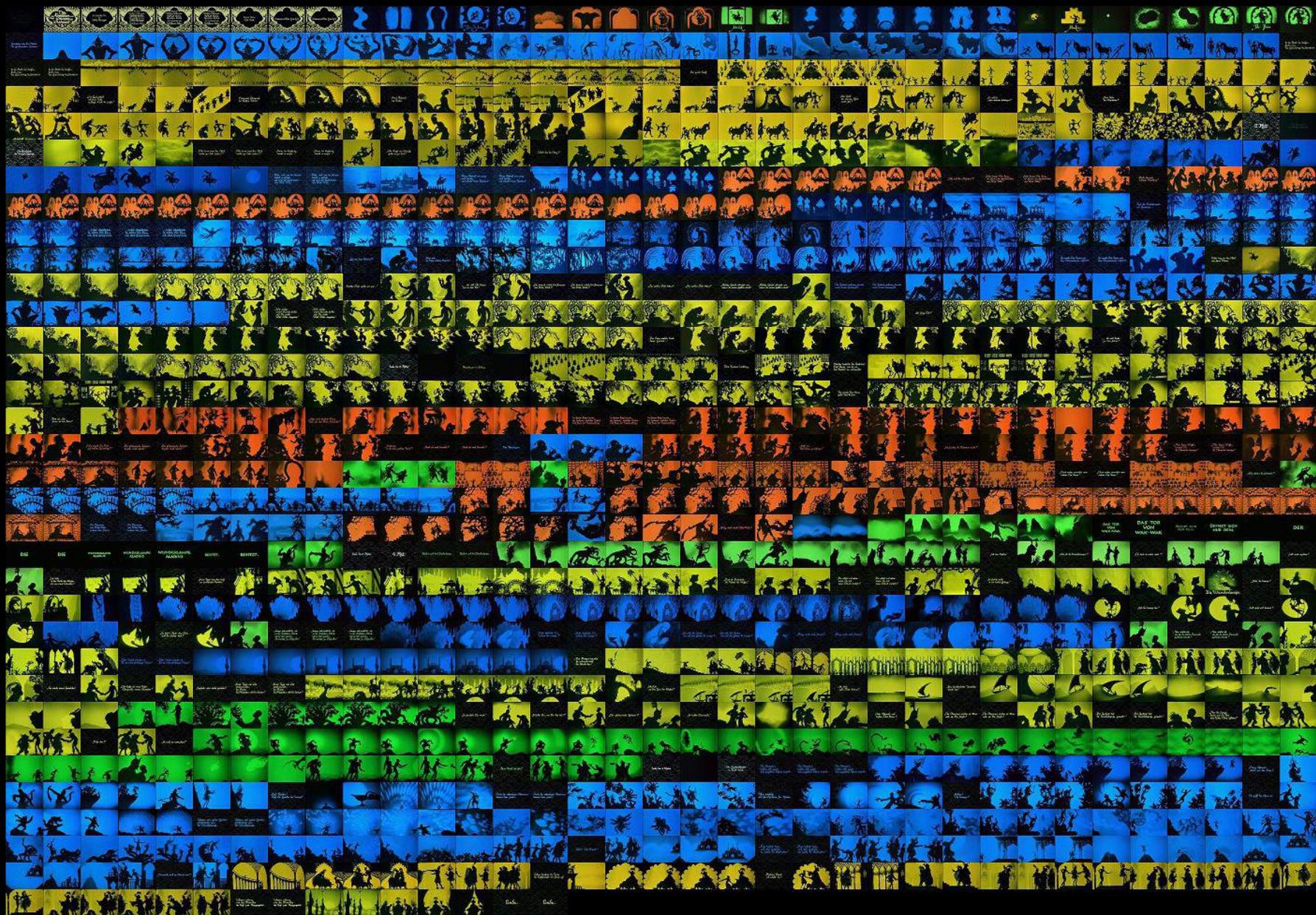
Schlemmer Frame Collection (Austrian Film Museum)



https://www.filmmuseum.at/en/collections/special_collections/schlemmer_frame_collection



Brightness in single frames from „The Eleventh Year“ (Dziga Vertov, 1928)
[Lev Manovich/Software Studies Initiative]



1/100 Frames from „The Adventures of Prince Achmed“ (Lotte Reiniger, 1926)
[Adelheid Heftberger/ImageJ]



1/100 Frames from „Oliver Twist“ (Márton Garas, 1919)
[Adelheid Heftberger/ImageJ]

THE COMPOSITIONAL CONSTRUCTION OF THE SHOT

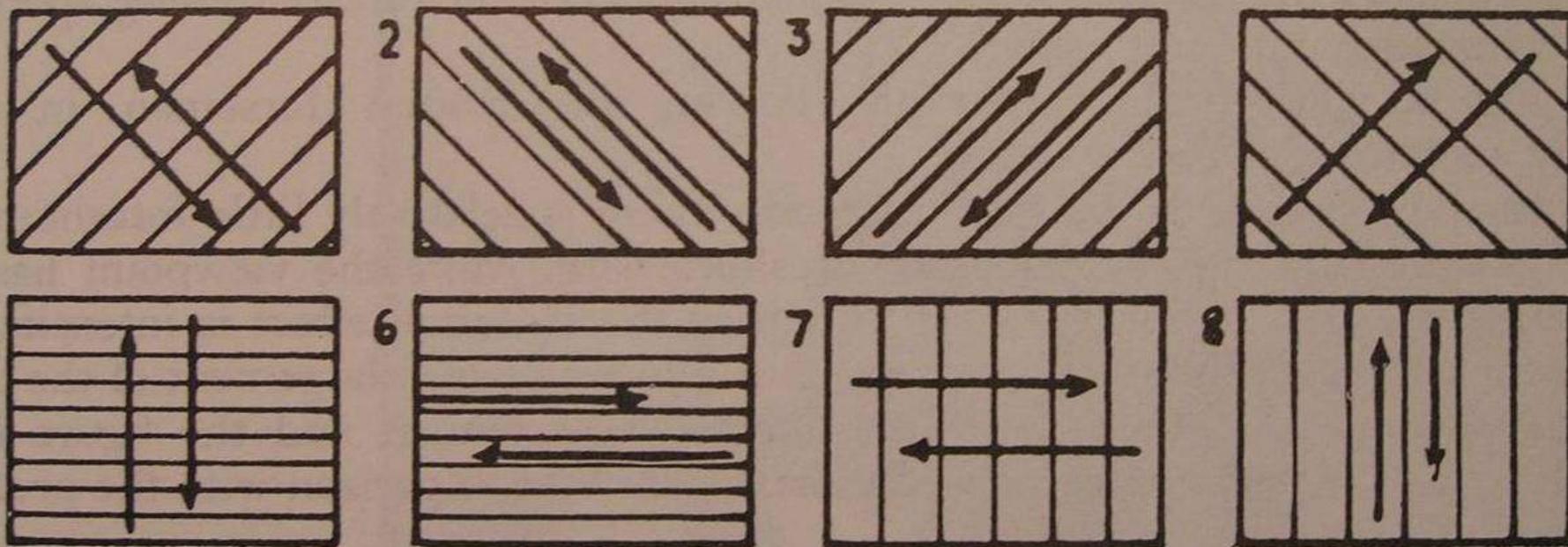


FIG. 59.—Plan of directions of kinetic movement in the frame.

Vladimir Nilsen: „Cinema as Graphic Art“ (1959)



1 Frame per Shot from „The Eleventh Year“ (Dziga Vertov, 1928)
[Lev Manovich/Software Studies Initiative]



Sports in Slow Motion in „Man with a Movie Camera“ (Dziga Vertov, 1929)
[Adelheid Heftberger/ImageJ]



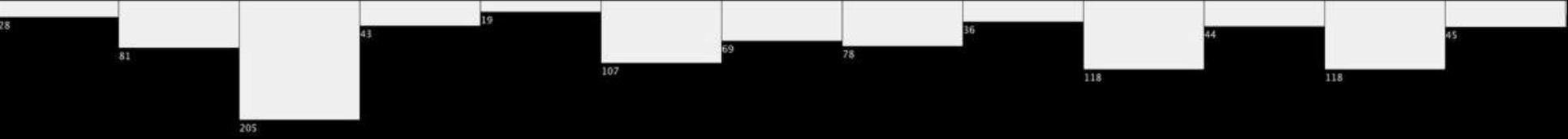
All faces in CU from „The Eleventh Year“ (Dziga Vertov, 1928)
[Adelheid Heftberger/ImageJ]



Visualization of the sequence „Electricity“ from „The Eleventh Year“ (Dziga Vertov, 1928) [Lev Manovich/Software Studies Initiative]



Visualization of two sequences containing faces in CU from „The Eleventh Year“ (Dziga Vertov, 1928) [Lev Manovich/Software Studies Initiative]



Three different ways of visualizing the shot lengths of faces in CU from „The Eleventh Year“ (Dziga Vertov, 1928) [Lev Manovich/Software Studies Initiative]



Start frame and end frame of a shot from a trailer for „Spione“ (Fritz Lang, 1928) [Adelheid Heftberger/ImageJ]

Moments in Time 1989/1990

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PLACES



A reception for visitors from the GDR
Göttingen
December 1989

Map labels include: Bodenwerder, Alfeld (Leine), Langelsheim, Goslar, Wernigerode, Nordhausen, Göttingen, Rosdorf, Duderstadt, Heiligenstadt, Sondershausen, Ebeleben, Mühlhausen/Thüringen, Eschwege, Sooden-Allendorf, Witzenhausen, Hann. Münden, Kassel, Göttingen, Bovenden, Rosdorf, Duderstadt, Nordhausen, Sondershausen, Ebeleben, Mühlhausen/Thüringen, Eschwege, Sooden-Allendorf, Witzenhausen, Hann. Münden, Kassel, Göttingen, Bovenden, Rosdorf, Duderstadt, Nordhausen, Sondershausen, Ebeleben, Mühlhausen/Thüringen, Eschwege, Sooden-Allendorf, Witzenhausen, Hann. Münden, Kassel.

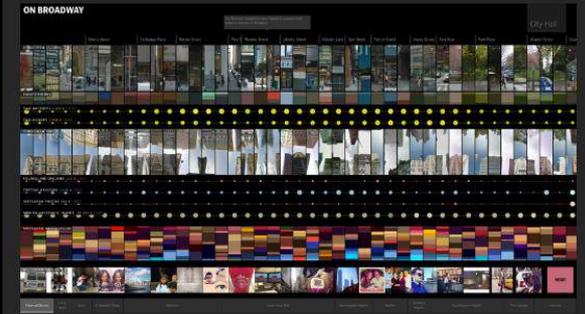
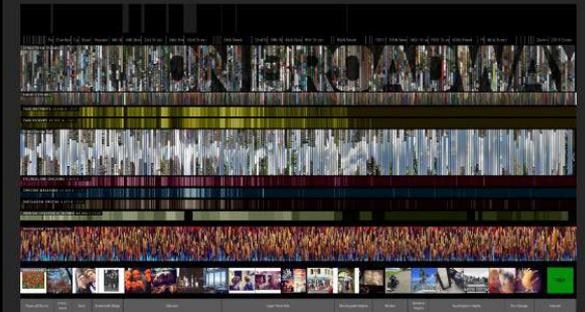
Which places come to mind when you think of the time of the Fall of the Wall and German reunification? You can probably remember Berlin's Brandenburg Gate and other border checkpoints, the best of you can maybe even recall the events in Hungary and Leipzig. But how did people in places such as Suhl, Gotha, Plauen or Mödlareuth experience the time?

More than 20 years on, only a few places represent an experience that extended throughout large parts of Europe. Our map however, is dotted with a multitude of flags, because the internet archive presents images from places that did not make it into the attention of the media, as well as new perspectives on well-known ones. Our photographs, films and memories give room to different possibilities for observation.

► REDISCOVERED PLACES

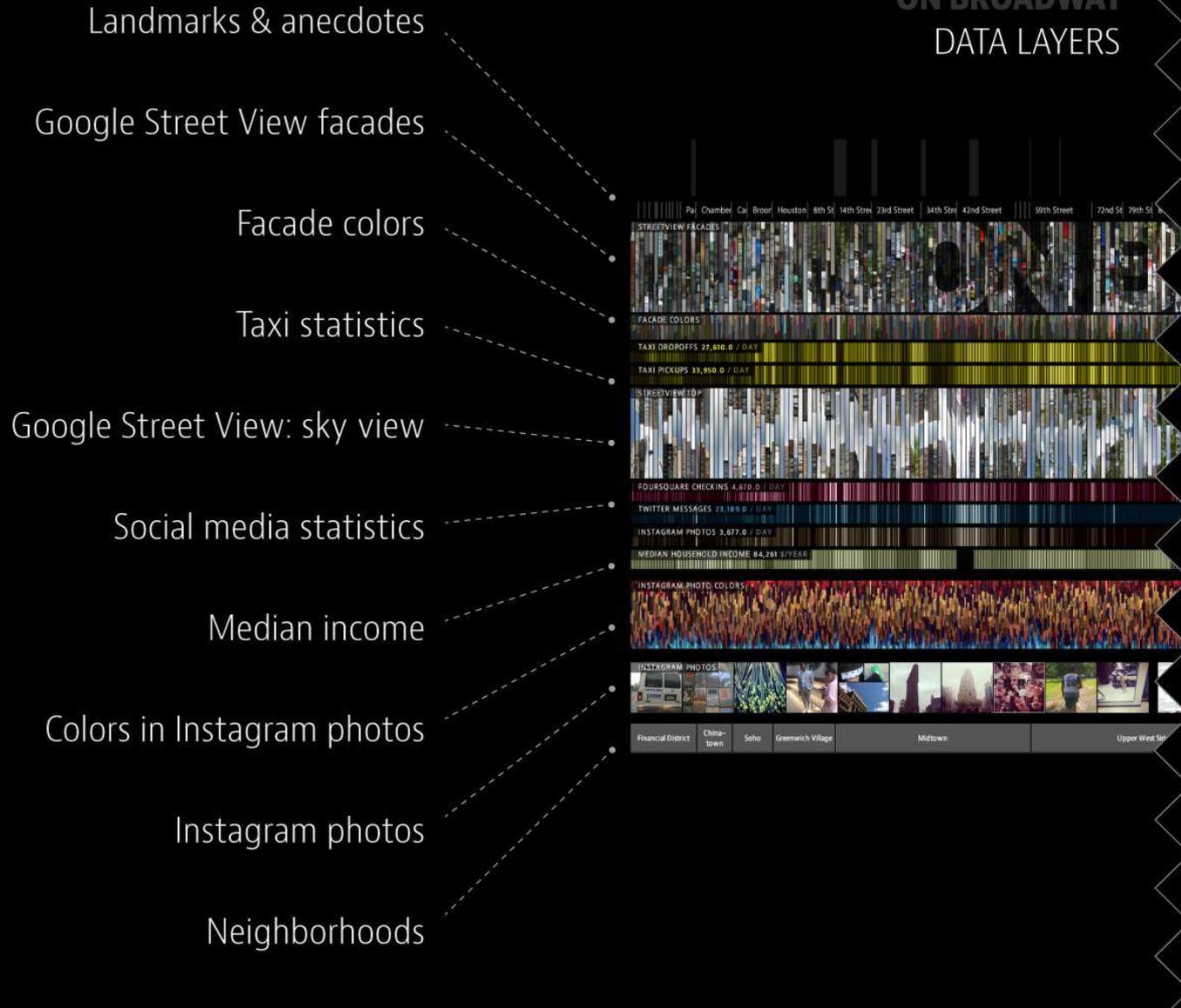
► MAP

Geo-referenced places of film, photo and memories
(<https://www.wir-waren-so-frei.de/index.php/wwsf/Places/Map>)

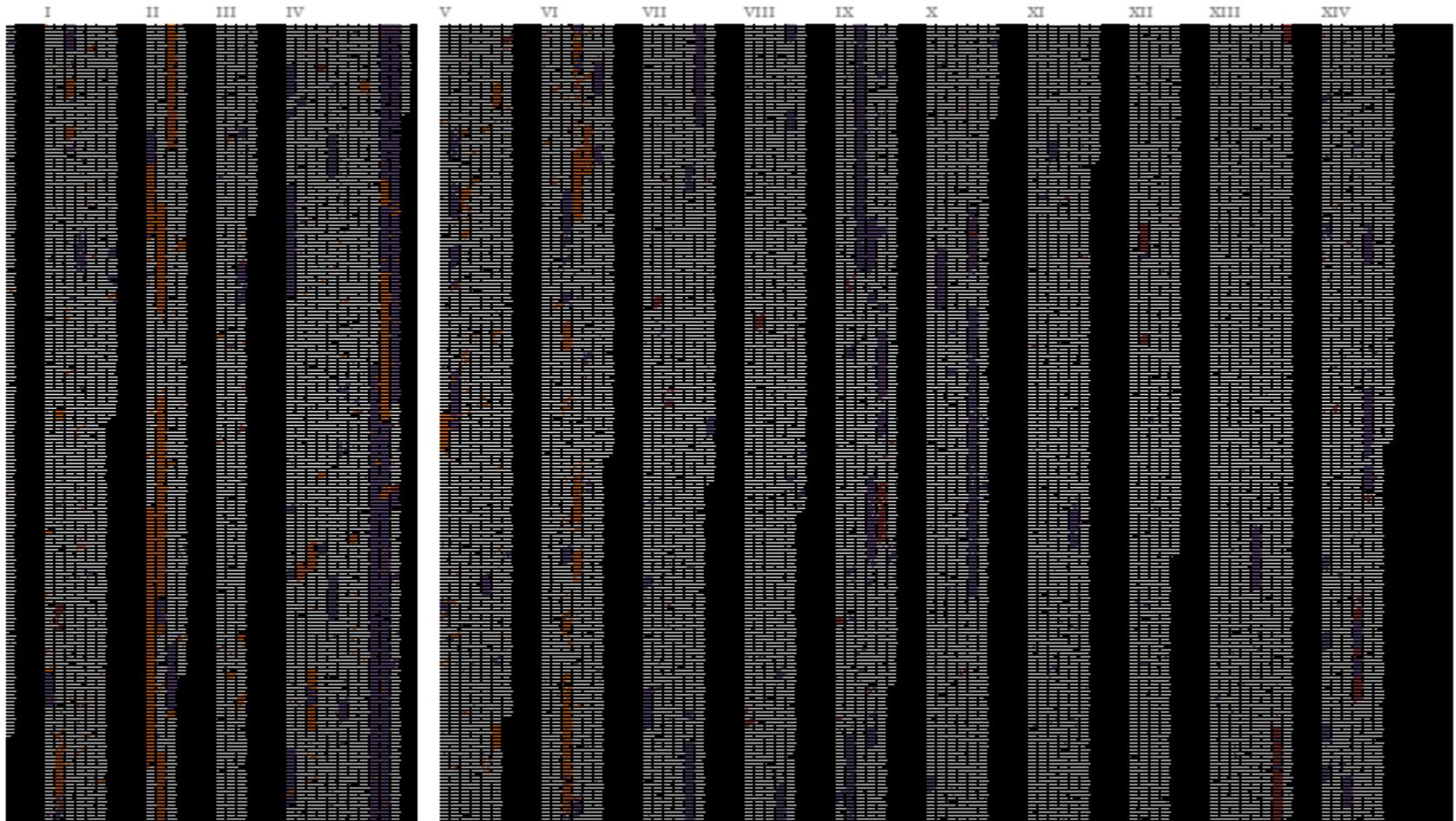


On Broadway (Daniel Goddemeyer, Moritz Stefaner, Dominikus Baur, Lev Manovich)
(<http://on-broadway.nyc/>)

ON BROADWAY DATA LAYERS



On Broadway (Daniel Goddemeyer, Moritz Stefaner, Dominikus Baur, Lev Manovich)
(<http://on-broadway.nyc/>)



■ First Edition (1859)
 ■ Second Edition (1860)
 ■ Third Edition (1861)
 ■ Fourth Edition (1866)
 ■ Fifth Edition (1869)
 ■ Sixth Edition (1872)

Ben Fry's visualization of Charles Darwin's „On the Origin of Species“ (1859)
 (<https://fathom.info/traces/>)



1.
MOMENT-
TO-
MOMENT



2.
ACTION-
TO-
ACTION



3.
SUBJECT-
TO-
SUBJECT



4.
SCENE-
TO-
SCENE



5.
ASPECT-
TO-
ASPECT



6.
NON-
SEQUITUR

THIS SORT OF CATEGORIZATION IS AN *INEXACT SCIENCE* AT *BEST*, BUT BY USING OUR TRANSITION SCALE AS A *TOOL* --

-- WE CAN BEGIN TO UNRAVEL SOME OF THE MYSTERIES SURROUNDING THE *INVISIBLE ART* OF *COMICS* STORYTELLING!



MOST *MAINSTREAM COMICS* IN AMERICA EMPLOY STORYTELLING TECHNIQUES FIRST INTRODUCED BY *JACK KIRBY*, SO LET'S START BY EXAMINING THIS LEE-KIRBY COMIC FROM 1966.

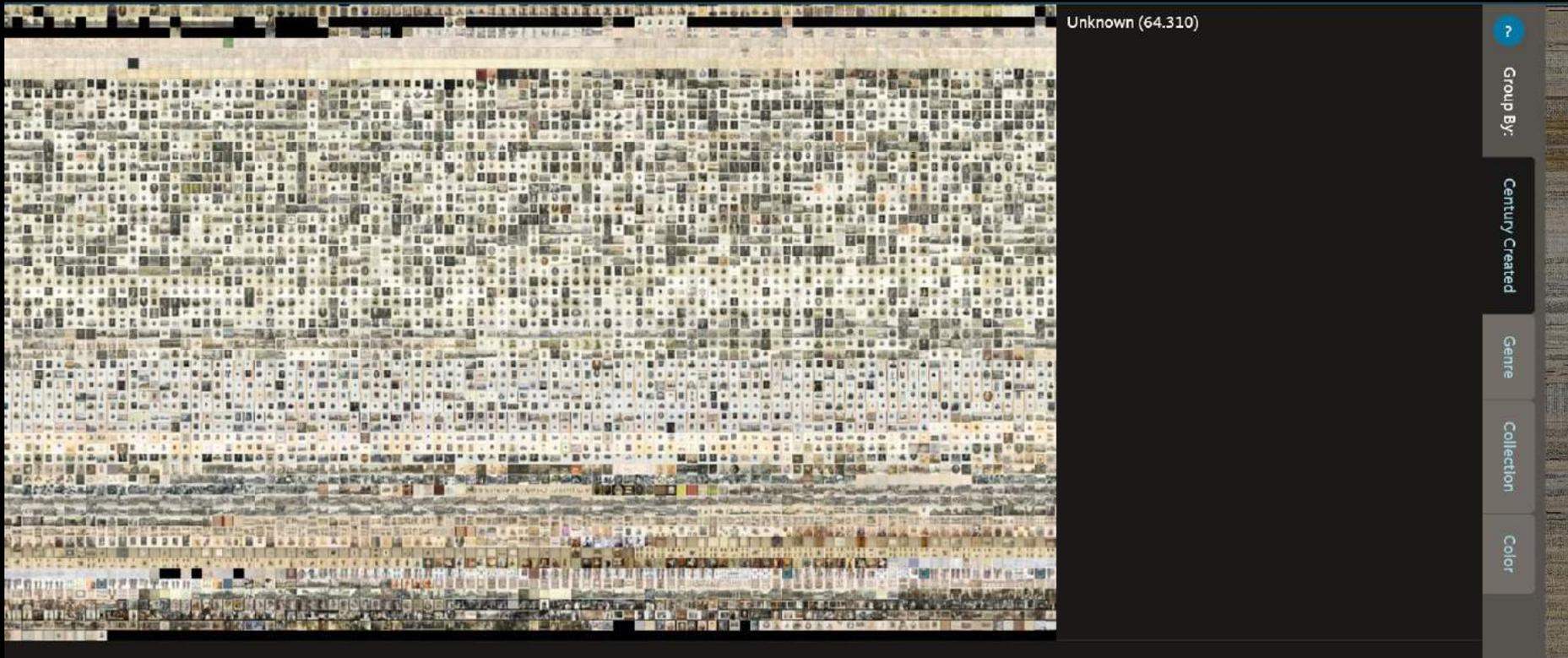


ALTOGETHER, I COUNT *NINETY-FIVE* PANEL-TO-PANEL TRANSITIONS. LET'S SEE HOW THEY BREAK DOWN *PROPORTIONATELY*.



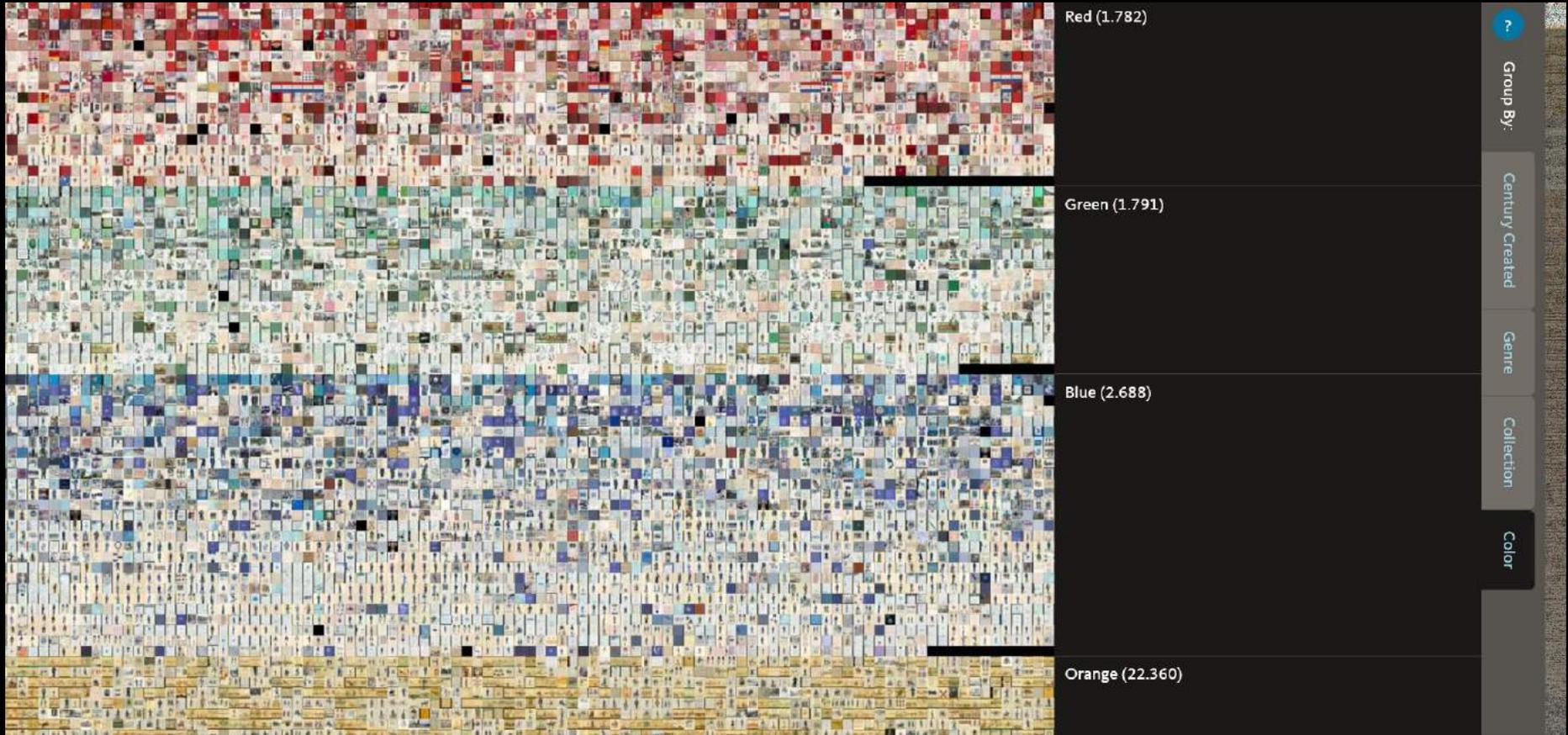
Scott McCloud (Understanding Comics): Storytelling

New York Public Library Visualization



(<http://publicdomain.nypl.org/pd-visualization/>)

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New York Public Library Visualization

THE NEW YORK PUBLIC LIBRARY
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Street scene at 38th Street and 7th Avenue, New York City

TYPE OF RESOURCE still image	GENRE Photographs	DATE CREATED 1936
DIVISION The Miriam and Ira...	SPONSOR United States. Farm...	PHOTOGRAPHER Lee, Russell, 1903-1...

IMAGE ID
5164597

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(<http://digitalcollections.nypl.org/items/859ad6c0-2289-0132-01d6-58d385a7bbd0>)

Thank you for your attention!

Kontakt: adelheidh(@)gmail.com

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Adelheid Heftberger: *Kollision der Kader*. München:
edition text+kritik 2016.

flickr: „Vertov films comparisons“

<https://www.flickr.com/photos/culturevis/albums/72157622608431194>