

Online data resources

for use with music analysis software

Who owns music?

- Business entity (author/composer/record company)
- Society (open source)
- Rights society (licensed)
- A cultural institution (cultural property)
- Your teacher or school (pedagogical property)

Music available for research

- ~~Business entity (author/composer/record company)~~
- Society (open source)
- ~~Rights society (licensed)~~
- A cultural institution (cultural property)
- Your teacher or school (pedagogical property)
- You!

Categories of symbolic musical data

- By musical repertory
 - Classical/CMN
 - Early Music
 - Contemporary music
 - Folk music
 - Popular music
 - Ethnic (non-Western art music)

Online categories of symbolic musical data available for research

- By musical repertory
 - Classical music /Common music notation
 - Early Music /Mensural notation
 - ~~■ Contemporary music ©~~
 - Folk music (mainly monophonic)
 - ~~■ Popular music ©~~
 - Ethnic/art music /recorded sources

Online categories of symbolic musical data

- Classical music /Common music notation
 - [MuseData](#) (symbolic, part-by-part)
- Early Music /Mensural notation
 - [Josquin Research Project](#) (symbolic, score)
- Musical incipits /classical, folk, Renaissance
 - [Themefinder](#) (symbolic, selected portions)
- Folk music (mainly monophonic)
 - [KernScores](#) /monophonic folksongs, many piano works
- Ethnic/art music /recorded sources
 - [KernScores](#) (limited supply)

Offsite digital music resources

- All the works of Beethoven:

http://daten.digitaler-sammlungen.de/~db/ausgaben/uni_ausgabe.html?projekt=1253175921&recherche=ja&ordnung=sig

- Early editions of Chopin: <http://chopin.lib.uchicago.edu/>

- New (in copyright) Mozart Edition:

<http://dme.mozarteum.at/DME/nma/start.php?l=4>

Online sources of digitized music (not encoded)

- **Out-of-copyright reprints**
 - Works by one composer
 - Works from one collection
 - Sheet-music collections
- **Music manuscripts**
 - Works by one composer
 - By collection,
 - By repertory
 - By many other categories
- **Part-books**
 - Mainly anthologies
- **Sound archives**
- **Image archives**
 - Manuscript details
 - Maps
 - Photographs
 - Watermarks
- **Book adjuncts**
 - Opera libretti
 - Poetry
 - Tracts
 - Incidental music

Sound archives

- New Zealand Pianola site
 - <http://www.pianola.co.nz/index.asp>
 - http://www.pianola.co.nz/rollscans/rollscan_search.asp
 - Permits download of MIDI-ized roll scans
- (US) National Jukebox
 - <http://lcweb2.loc.gov/diglib/ihas/html/ragtime/ragtime-home.html>
- Emile Berliner (UK)
 - <http://memory.loc.gov/ammem/berlhtml/berlhome.html>
- UC Santa Barbara Cylinder Collection

More details

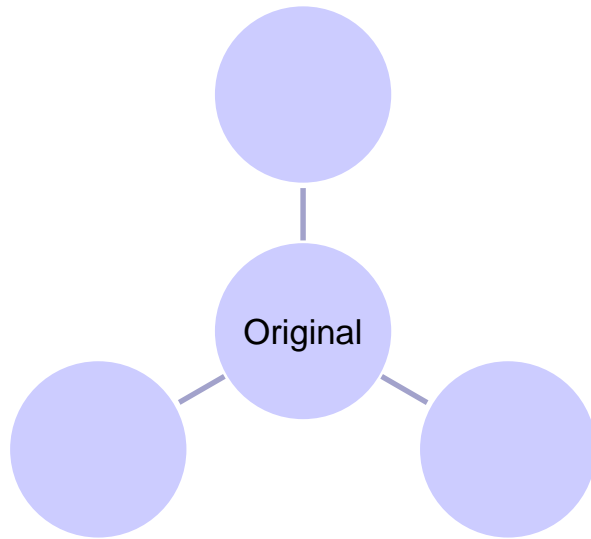
- http://wiki.ccarh.org/wiki/Links_for_Digital_Musicology
[not yet published; do not circulate]

2. What aspects of music are owned? Musical data as intellectual property

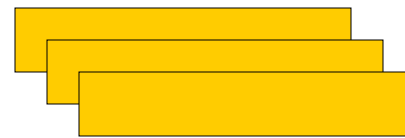
1. **Selectivity** of information sets
2. **Mutation** of information sets
3. Concept of "**derivative work**"
4. Work/data/**container** differentiation
5. **Expression vs. encapsulation** of identity

Selectivity and Mutation

- The centrifugal view (ontological)

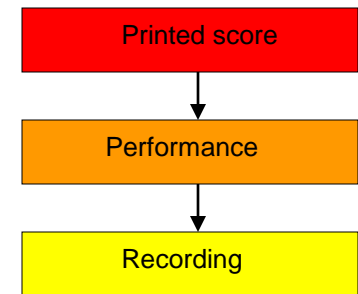


- The straight-line view (procedural)



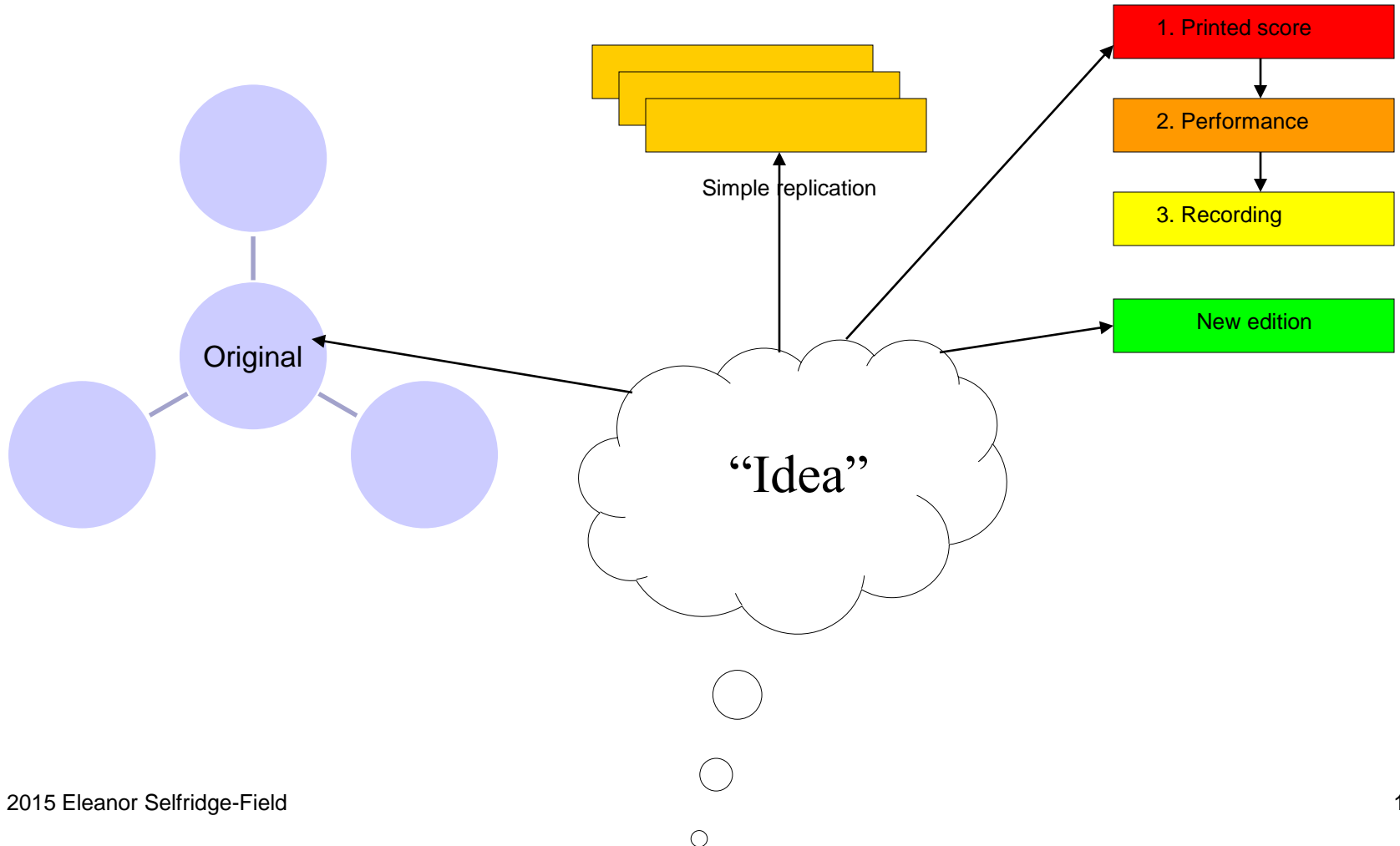
Simple replication

US Copyright Act



The mystical act of creation

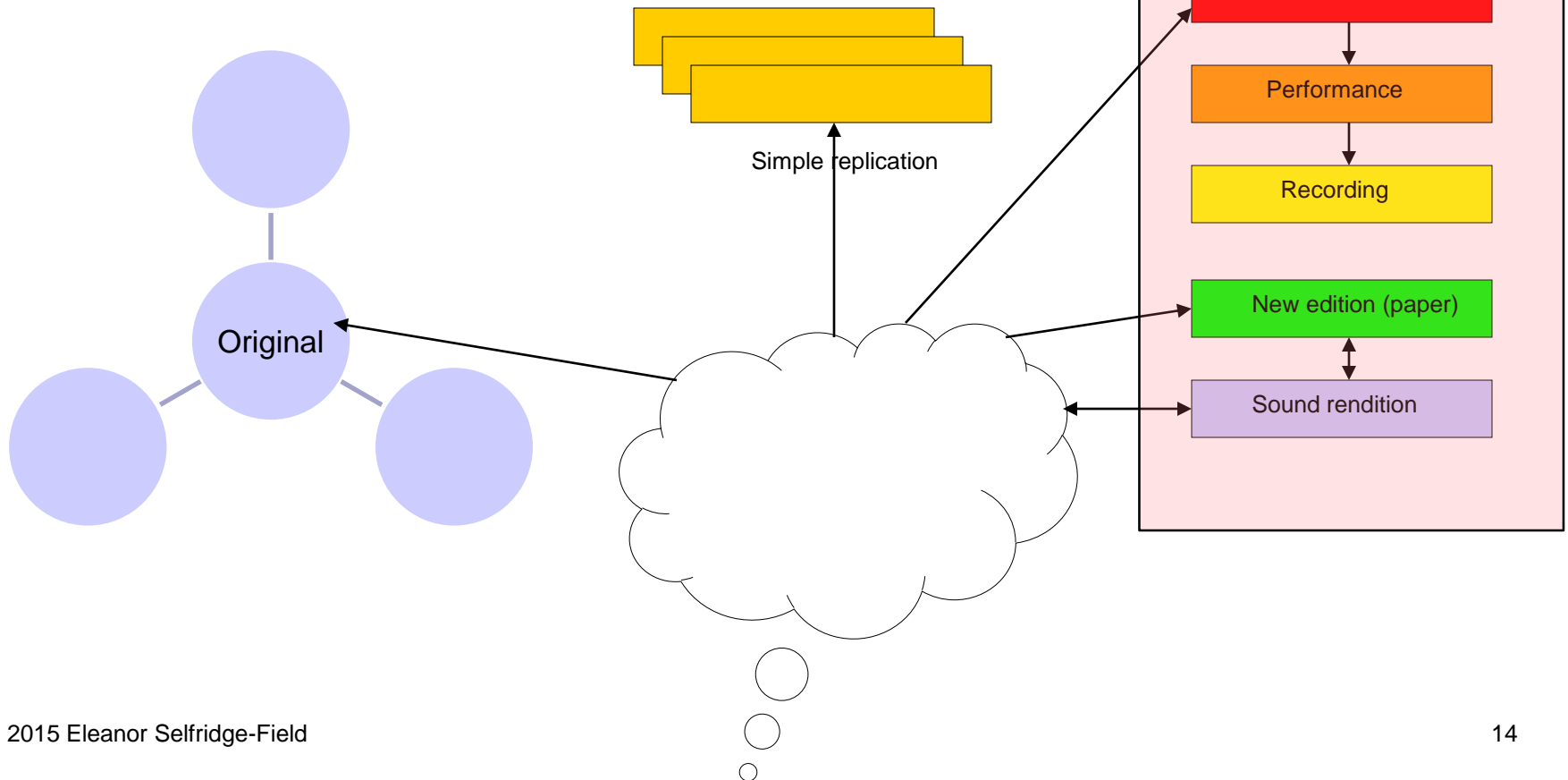
n The centrifugal view (ontological) n The one-way view (procedural)



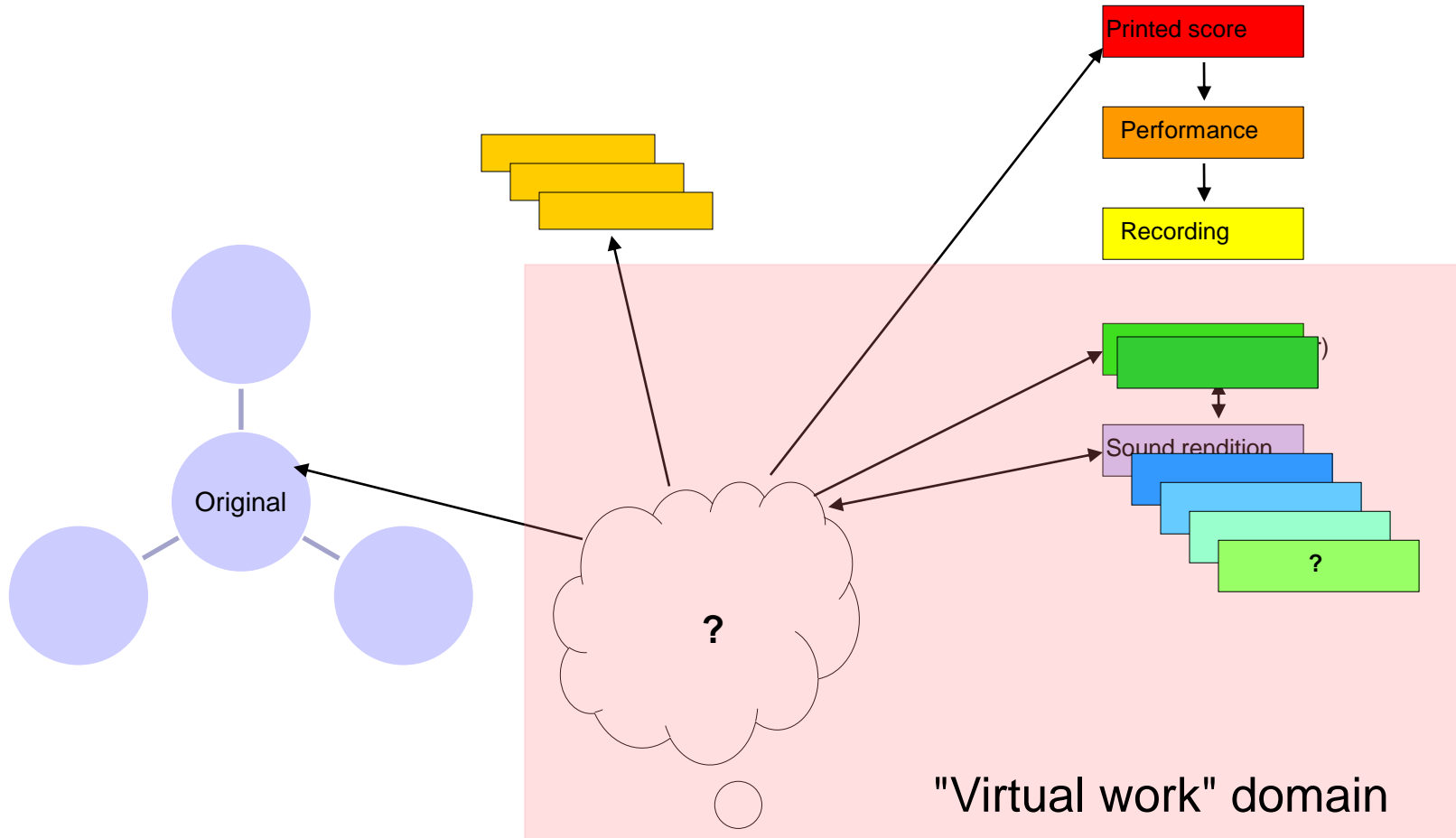
Enter electronic creation/editing

n The centrifugal view (ontological)

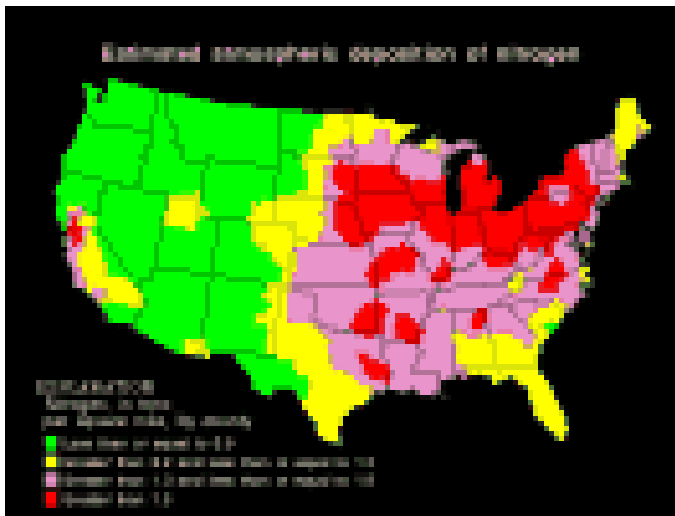
n The one-way view (procedural)



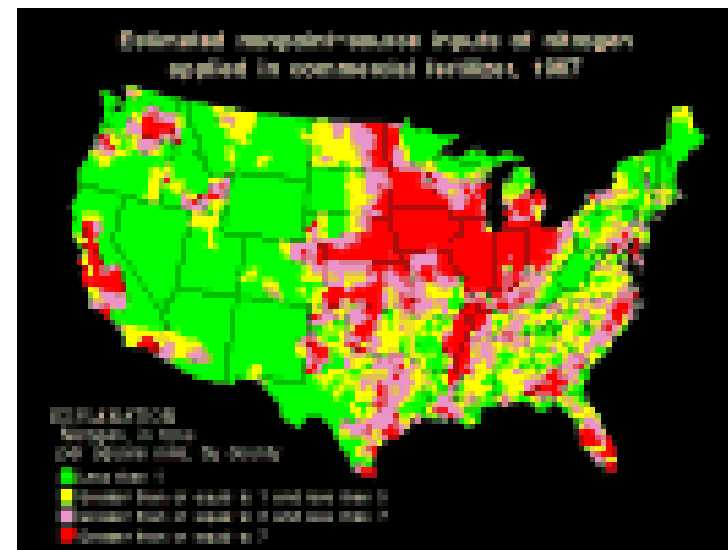
Enter electronic editing processes



Lawyers look for analogies



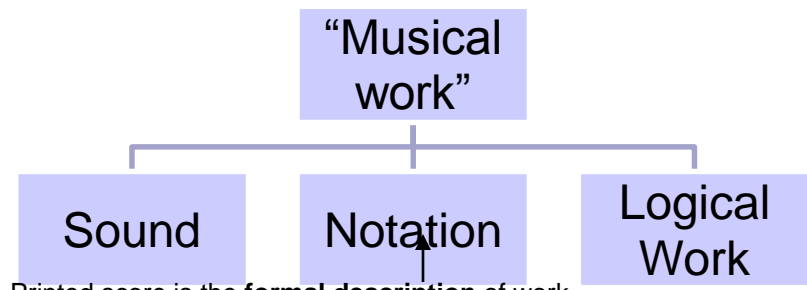
The atmospheric nitrogen map of the US



The ground nitrogen map of the US

Geometries of derivation

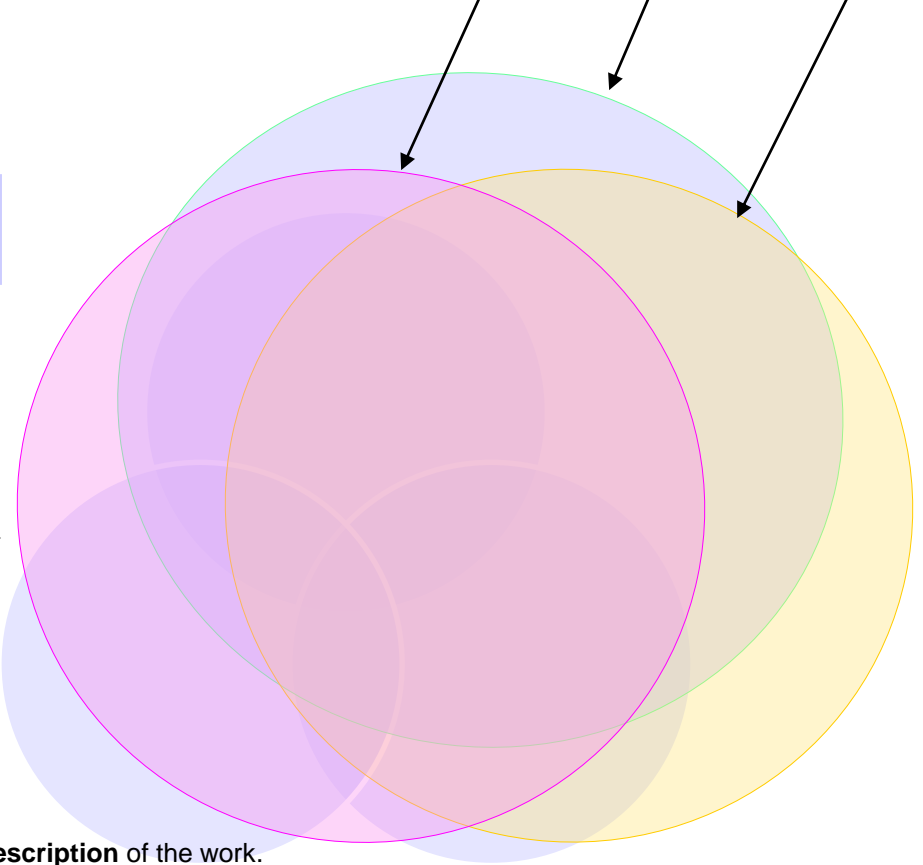
1900 view: Start here ↓



Printed score is the **formal description** of work.

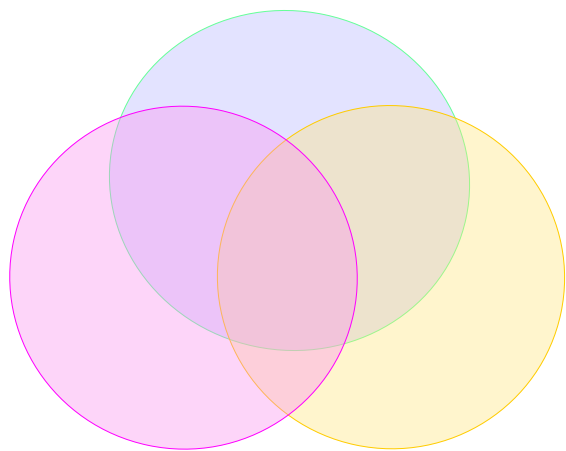


2000 view: Start here, or here, or here



Any data-set is a **selective description** of the work.

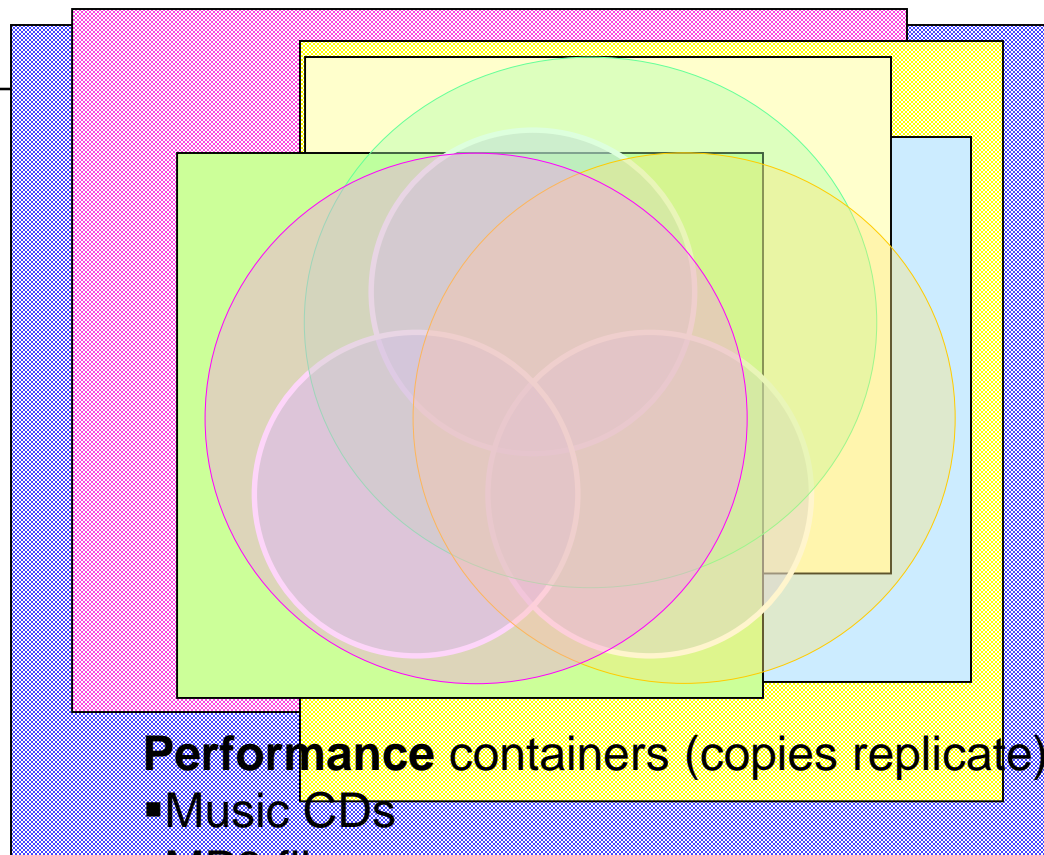
Fixation and “containers”



Data containers

- Text files*
- MIDI files*
- Analytical data files*
- Descriptive data files*

*Features are **separable** and **selectively present**.



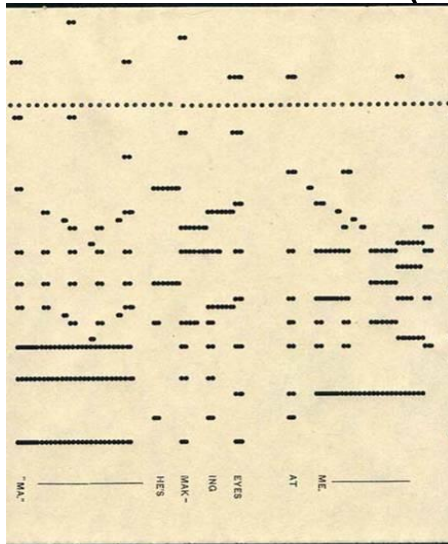
Performance containers (copies replicate)

- Music CDs
- MP3 files
- 45s, 78s, wax cylinders
- Piano rolls

Features are **inseparable**

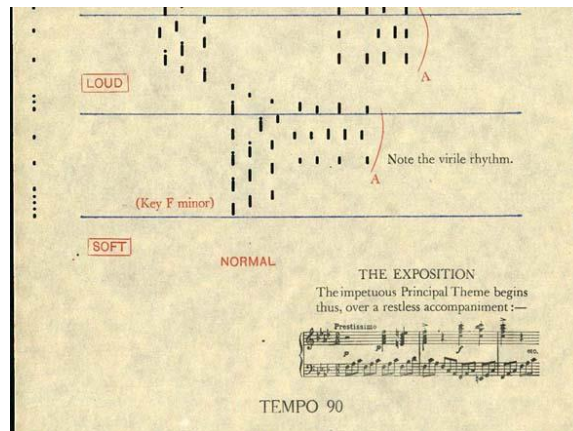
Tangible containers of invisible content

□ Piano rolls (tangible)



Beethoven, Op. 1, No. 2, IV
 (Pianola "AudioGraphic" Roll /US)
 Encoded: pitch, duration, dynamics
 Visually added: Verbal interpretations of key, dynamics, tempo, musical notation of incipit, and character

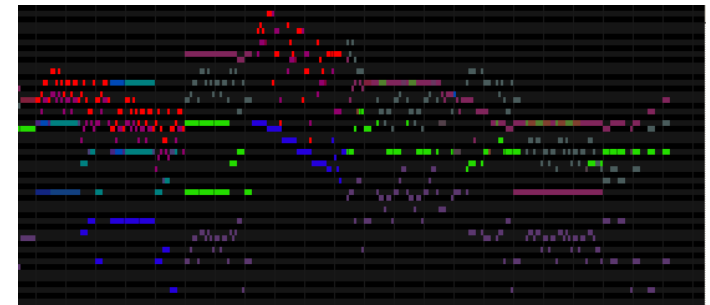
"Ma, He's Makin' Eyes at Me"
 (Aeolian/UK for 65-note "push-up player).
 Encoded: pitch, duration.
 Visually added: lyrics



Corelli, Op. 6, No. 8, I
 (MIDI output from *MuseData* Archive)
 Encoded (binary): key number (pitch), note-on times, note-off times (duration)
 Virtually added: visual "pseudo-piano roll" output from Sapp's "proll" program

□ MIDI files (tangible to extent that storage medium is tangible)

```
7f 45 4c 46 01 01 01 00 00 00 00 00 00 00 00 02 0 03 00 01 00
00 00 ac 8c 04 08 34 00 00 00 68 5e 00 00 00 00 00 00 34
00 20 00 05 00 28 00 16 00 15 00 06 00 00 00 34 00 00 00
34 80 04 08 34 80 04 08 a0 00 00 00 a0 00 00 00 05 00 00
00
```



Patent analogues to musical data



External "containers" (sheep) multiple,
Interior objects (genes) identical.
Duplication of static object(s)?



Michelangelo's *David* : (1) sculpture, (2) computer model
Different containers, "virtually identical" objects (always static)

External container (photograph) static,
Surface object (painting) static,
Derivative work?



Patent law



Conditions of existence:

Objects similar (yellow birch trees), appearance varies by time of year, weather, maturity, soil conditions, etc.

Static containers (photos) can only portray specific conditional states.

If fixed medium=film, container still static but dynamic properties of object better represented.

5. Fluid expression/**fixed** form

Music *liberates* time.



Containers *freeze* time.

Sara Hughes: Photo © 2002 John Storey. Permission pending.

5. Fluid expression/fixed identity: Art mobile, container fixed

Music *liberates* time.

Art of the performance.



Containers *freeze* time.

Art of the container

Photo © 2002 John Storey. Permission pending.

Summary of issues



- Determining the **core identity** of a musical work in the electronic age
- Fixing identity through **one iteration** in a time-bound art
 - Properties pertaining to agency, means of creation, and containers vs. properties of the work itself
 - Variable levels of identity and completeness in virtual scores
- Locating the sources of expression in "**tangible means of expression**"

