

Quantitative Data / ‘Lengths’ of Life

PGDV 5200 Major Studio

Xingwei Huang

Sep 24th, 2019

PART 1

Concept

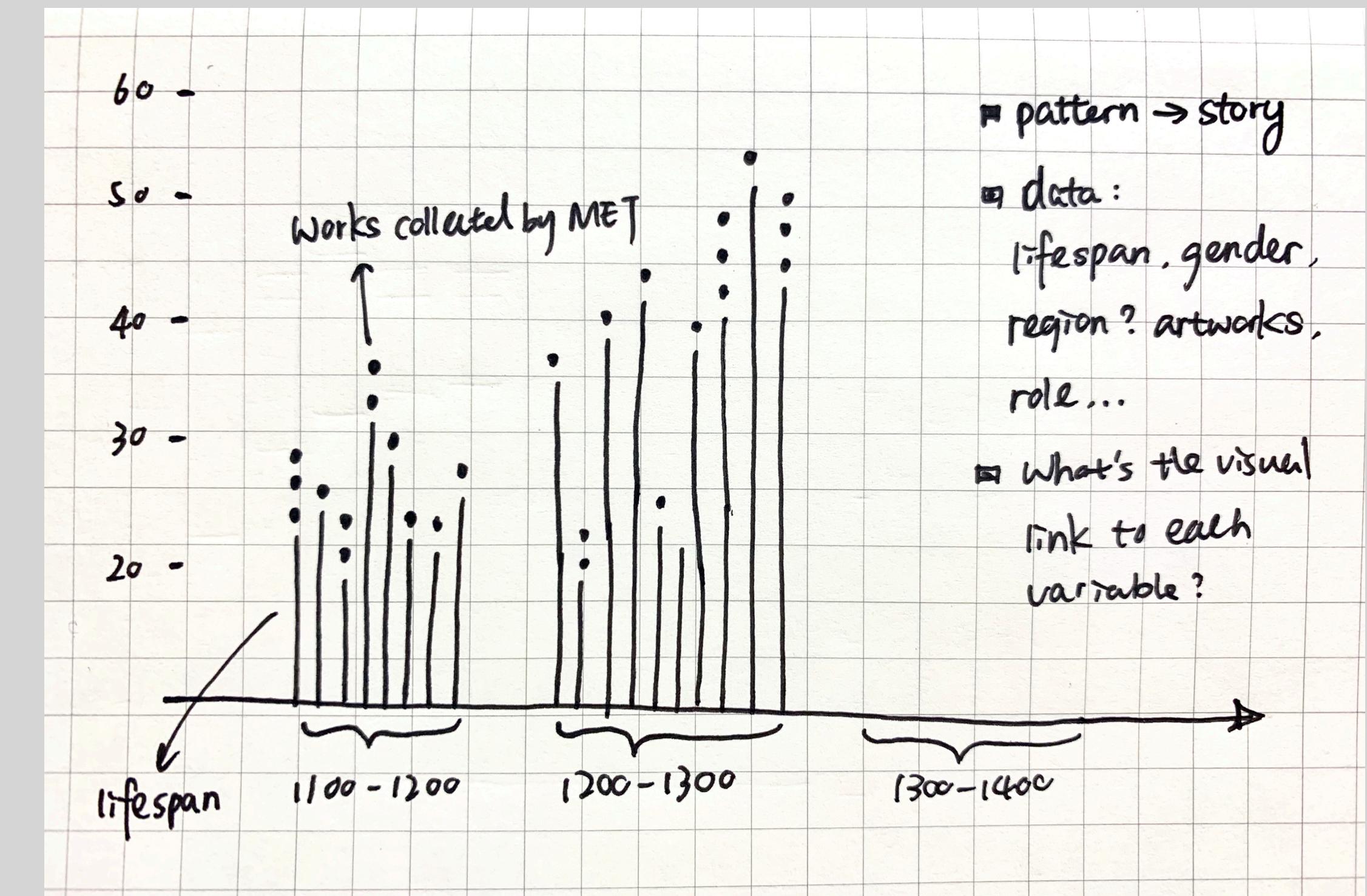
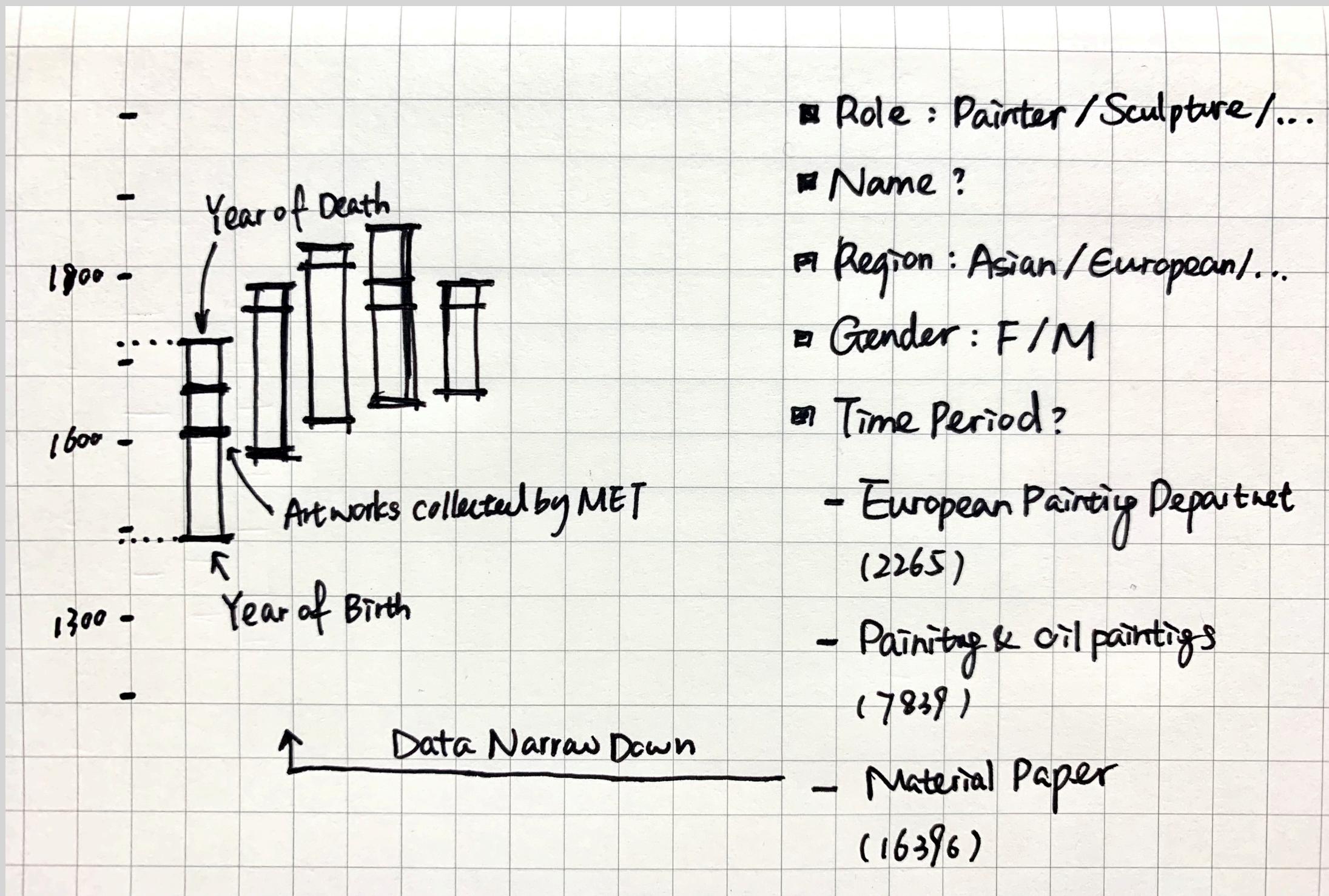
‘Lengths’ of Life



* The pattern formed by artists' life spans

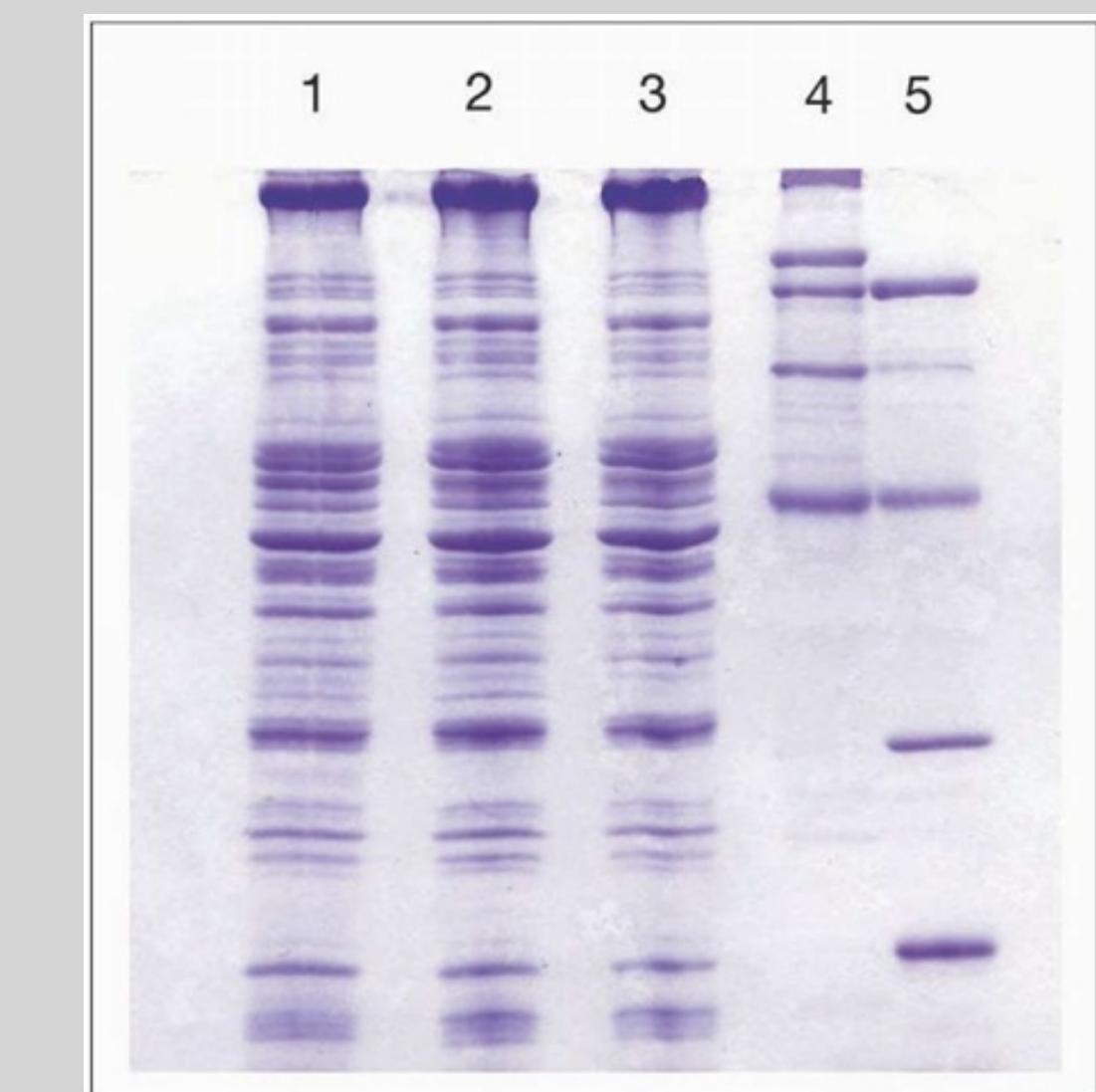
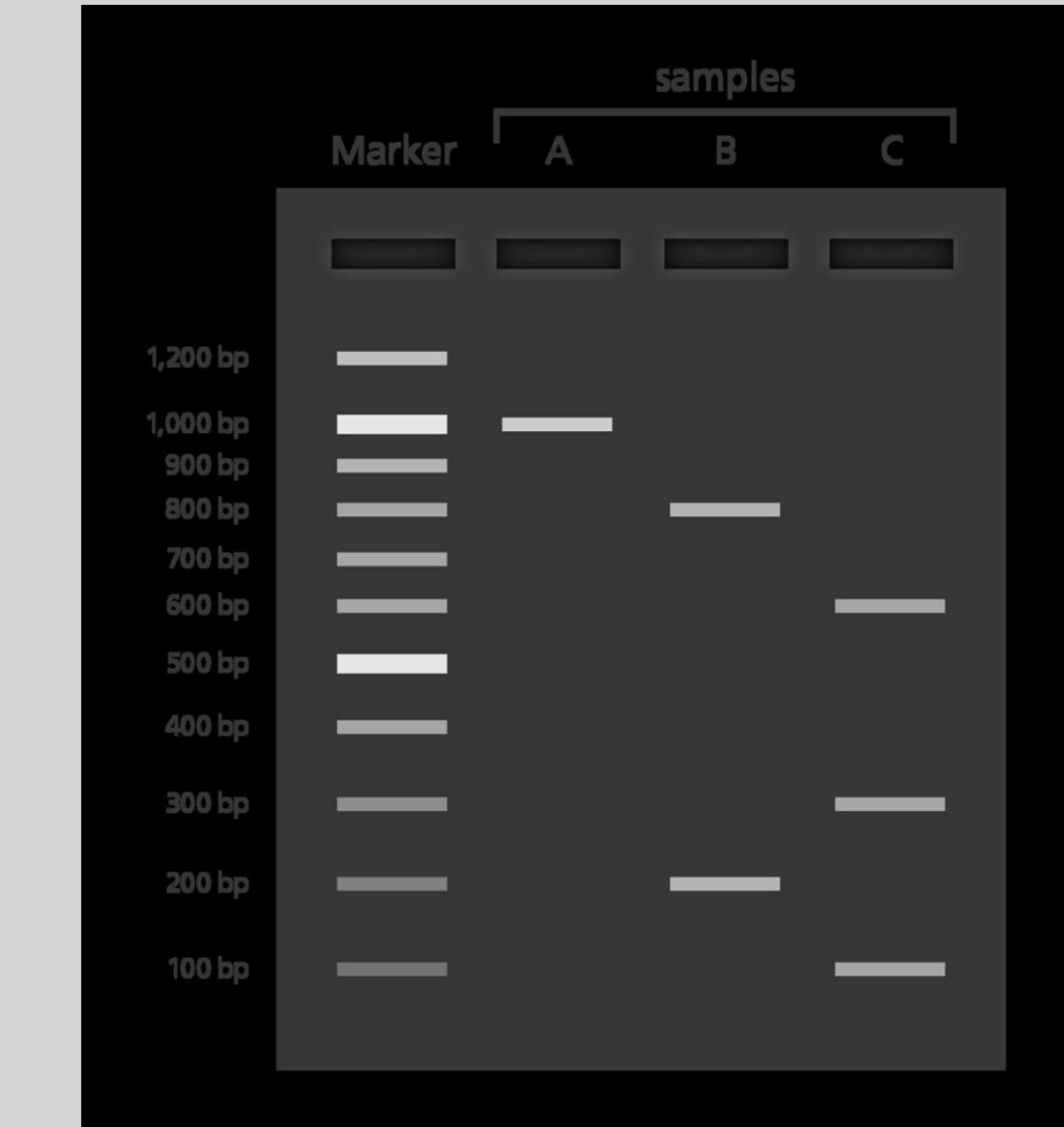
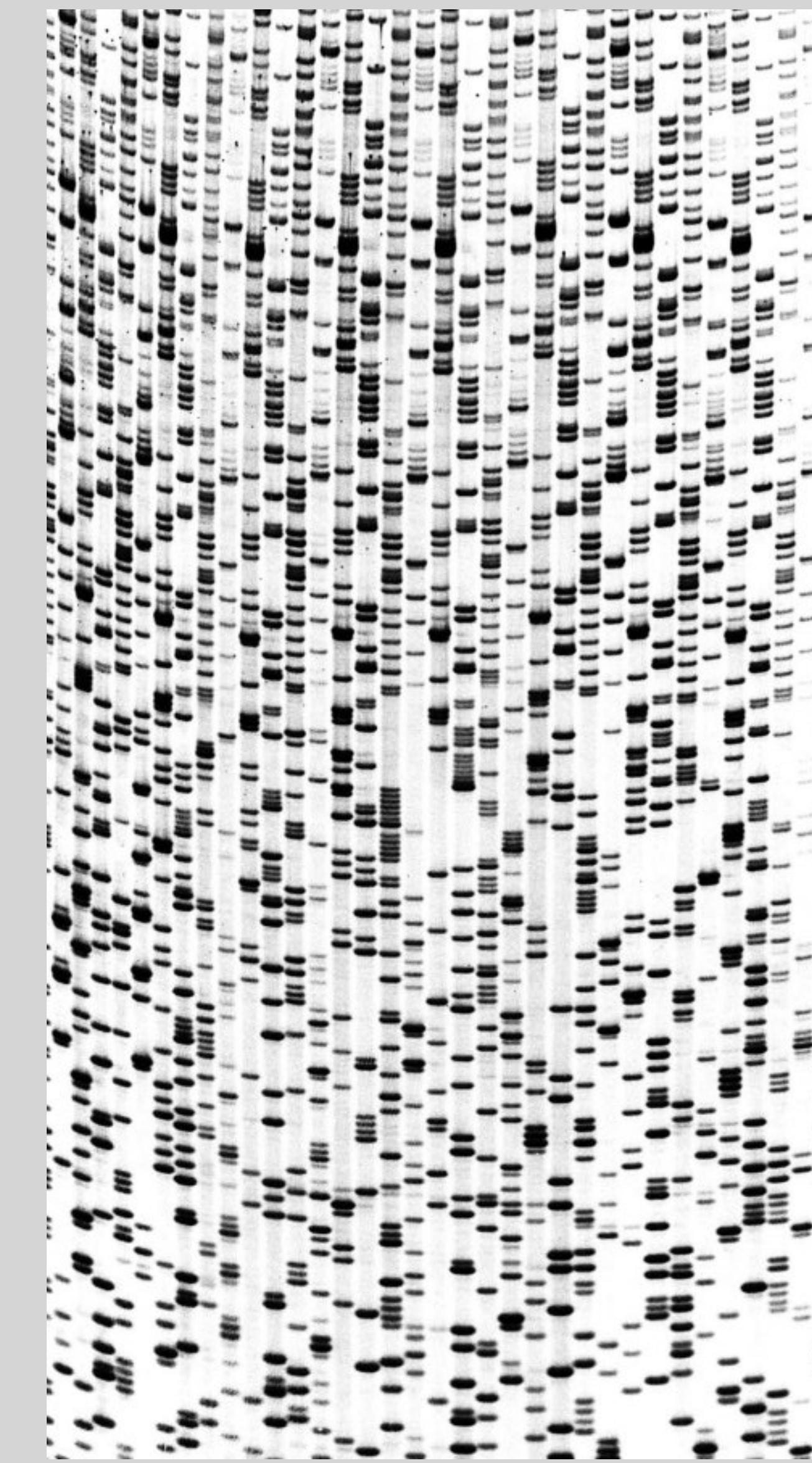
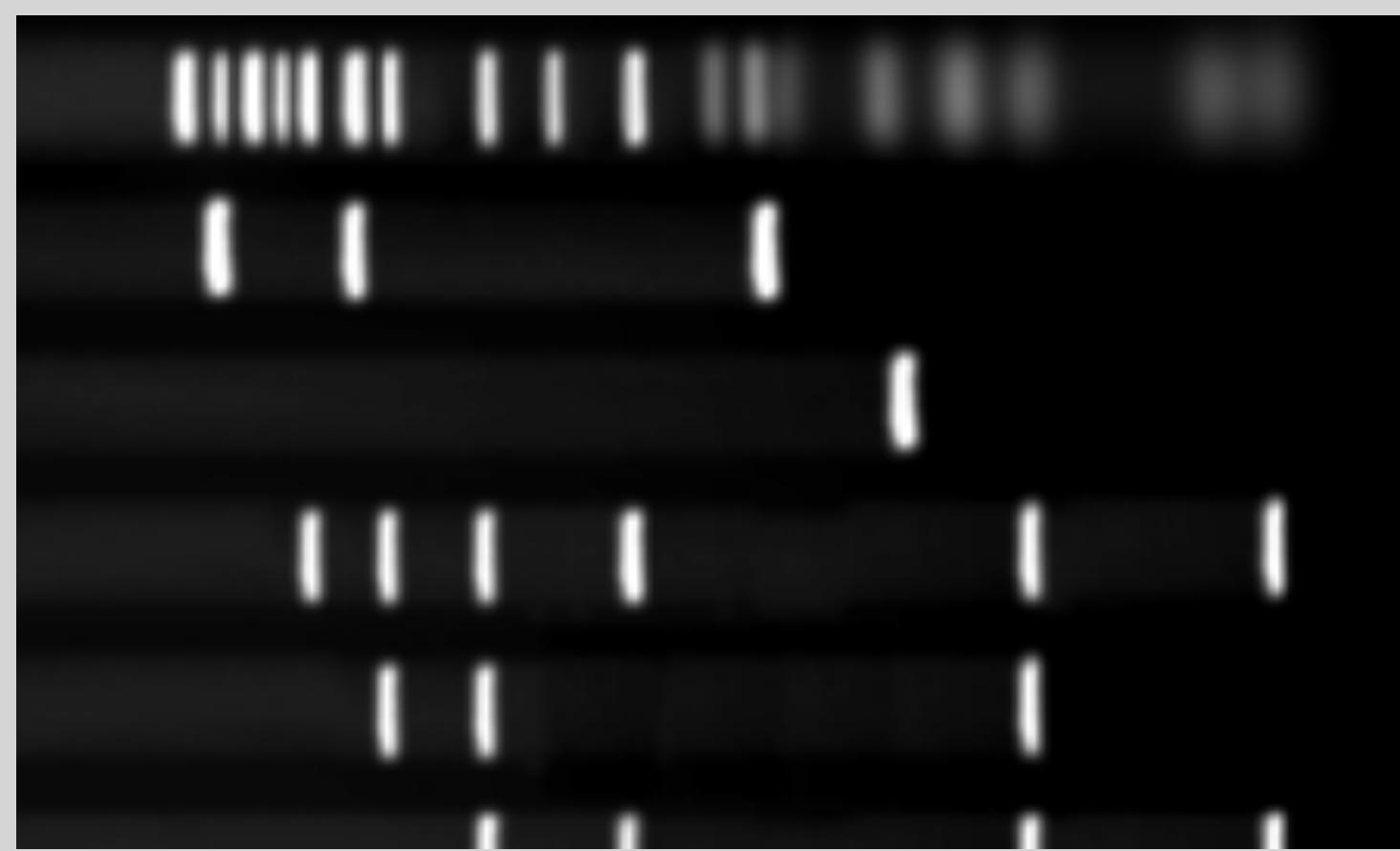
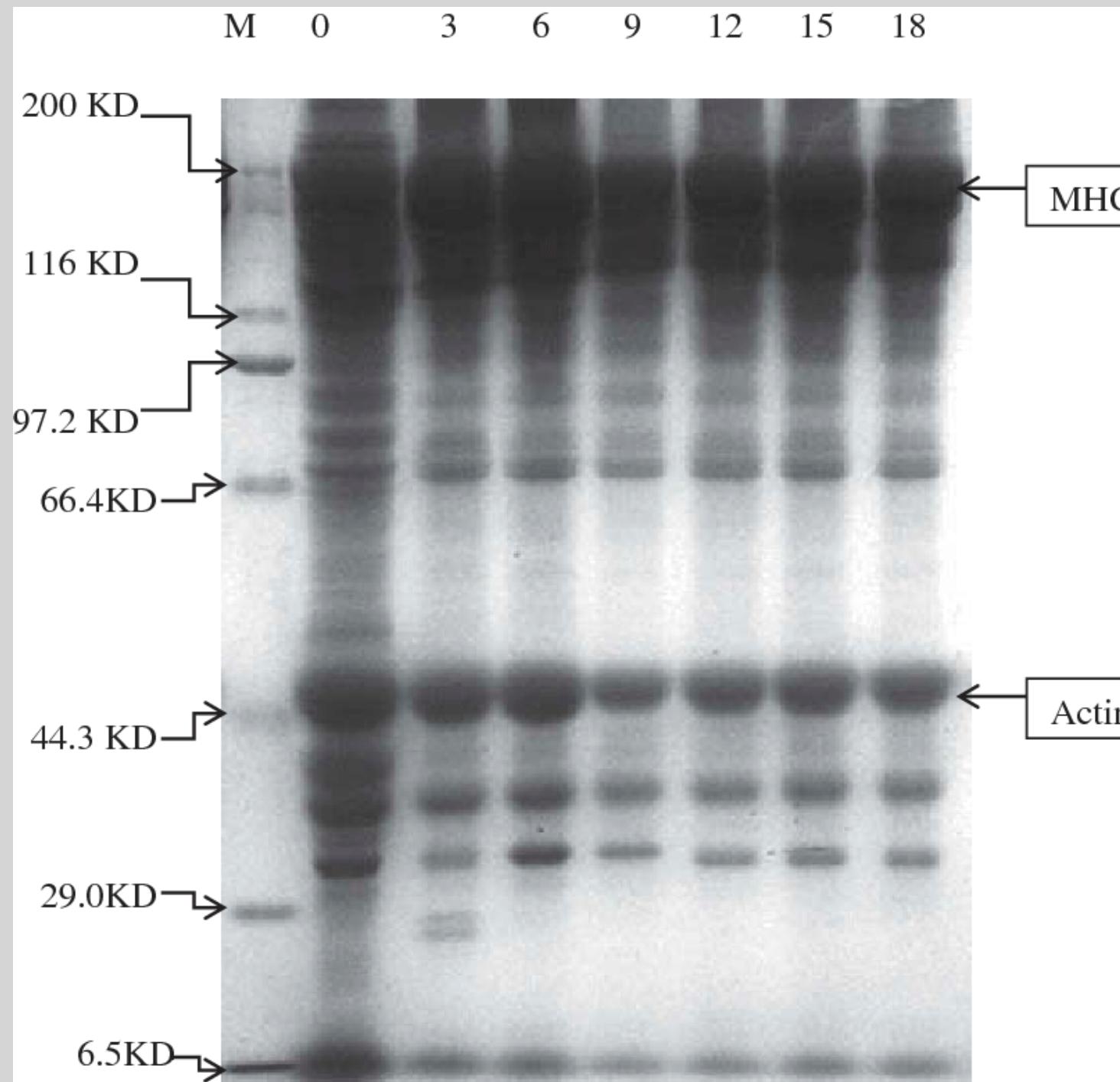
* Distance between artists' places of birth & places of death

/ Preliminary Sketches



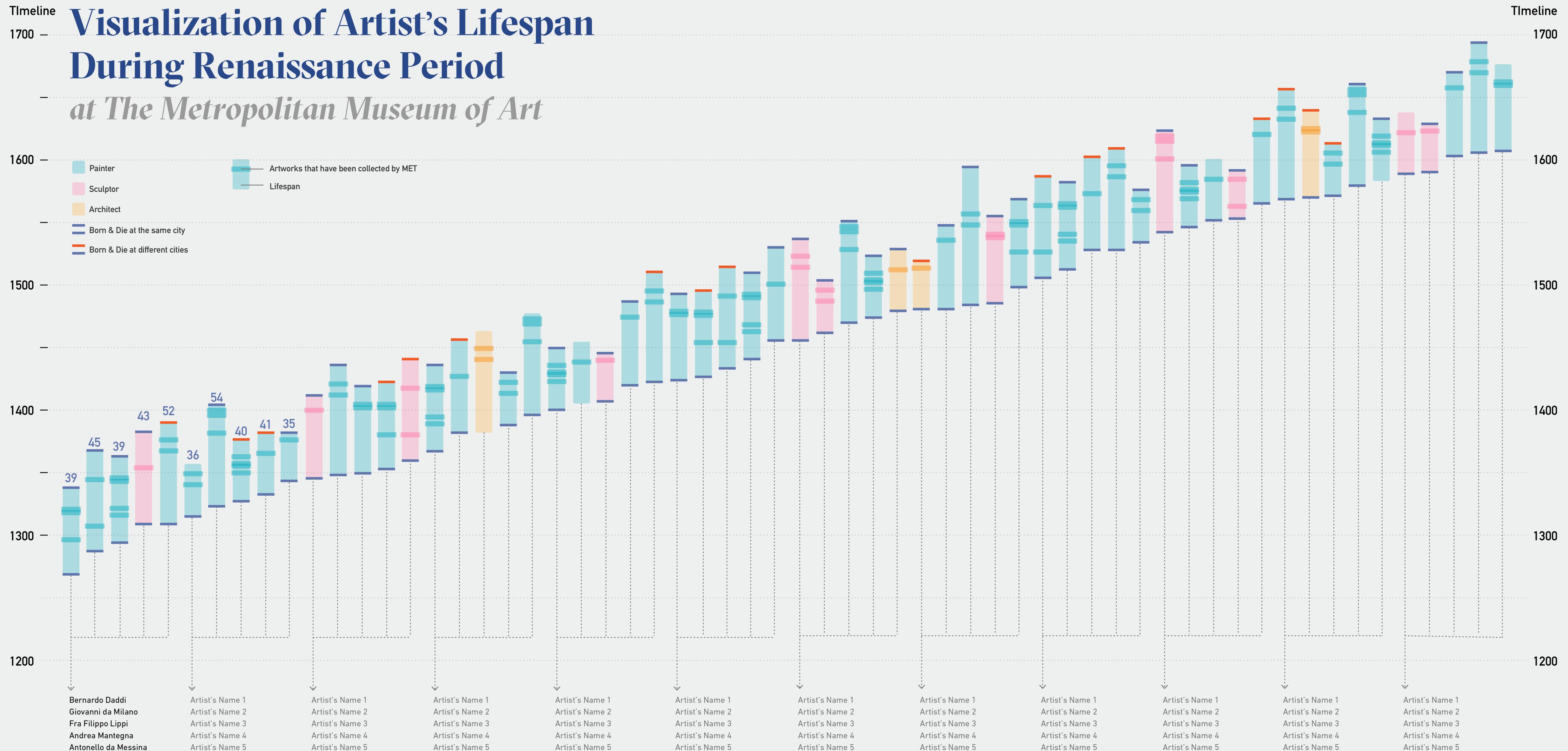
/ Inspiration

If we compare the Met museum to a breathing organism, **artists** are similar to its **DNA** which carrying genetic instructions for function and growth.

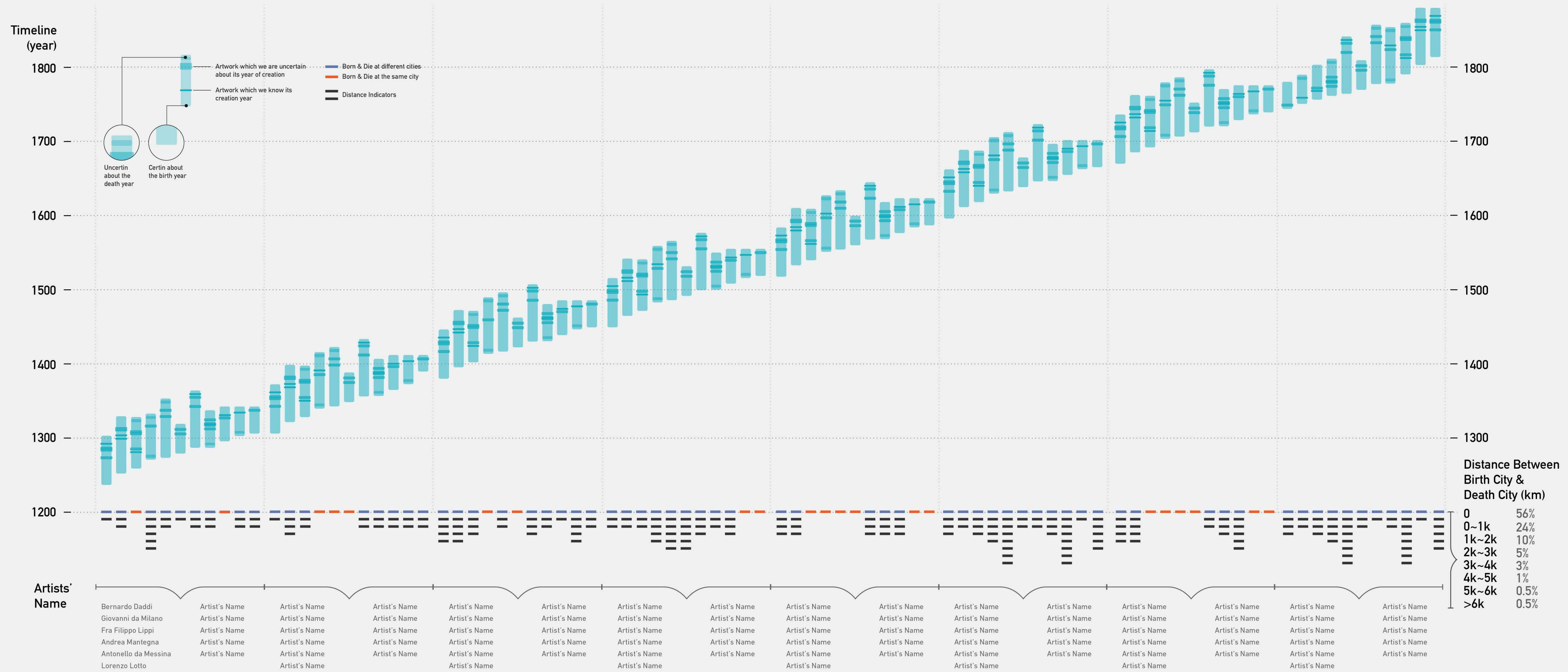


/ Gel Electrophoresis

Gel Electrophoresis is used as a diagnostic tool to visualize the fragments. Using electrophoresis, we can see how many different **DNA fragments** are present in a sample and how large they are relative to one another.



Lives' Dimensions in European Paintings Department at Met Museum



PART 2

Data

/ API Request

```
var currentID = objectData.objectID;
var currentTitle = objectData.title;
var currentDate = objectData.objectBeginDate;
var endDate = objectData.objectEndDate;
var artistName = objectData.artistDisplayName;
var artistBeginDate = objectData.artistBeginDate;
var artistEndDate = objectData.artistEndDate;
var geoLocation = objectData.artistDisplayBio;
var index = myArray.length;
myArray[index] = {};
myArray[index]["id"] = currentID;
myArray[index]["title"] = currentTitle;
myArray[index]["from"] = currentDate;
myArray[index]["to"] = endDate;
myArray[index]["name"] = artistName;
myArray[index]["yearOfBirth"] = artistBeginDate;
myArray[index]["yearOfDeath"] = artistEndDate;
myArray[index]["distanceBetween"] = geoLocation;
```

Met Data

File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

Share



	A	B	C	D	E	G	H	I	J	K	L	M
1	objectID	department	objectType	title	artistDisplayName	artistDisplayBio	birthCountry	birthCity	BPCertainty	deathCountry	deathCity	DPCer
2	436504	European Paintings	Painting	The Adoration	Giotto di Bondone	Italian, Florentine, 1266/76–1337	Italian	Florence	TRUE	Italian	Florence	TRUE
3	436068	European Paintings	Painting	Christ Enthron	Bernardo Daddi	Italian, Florence (?) ca. 1290–1348 Florence	Italian	Florence	FALSE	Italian	Florence	TRUE
4	436069	European Paintings	Painting, predella p	Saint Reparat	Bernardo Daddi	Italian, Florence (?) ca. 1290–1348 Florence	Italian	Florence	FALSE	Italian	Florence	TRUE
5	436070	European Paintings	Painting, predella p	Saint Reparat	Bernardo Daddi	Italian, Florence (?) ca. 1290–1348 Florence	Italian	Florence	FALSE	Italian	Florence	TRUE
6	436071	European Paintings	Painting, predella p	Saint Reparat	Bernardo Daddi	Italian, Florence (?) ca. 1290–1348 Florence	Italian	Florence	FALSE	Italian	Florence	TRUE
7	436900	European Paintings	Painting fragment	Madonna and	Lippo di Benivieni	Italian, Florentine, active 1296–1327	Italian	Florence	TRUE	Italian	Florence	TRUE
8	437649	European Paintings	Painting	Christ Blessing	Segna di Buonaventura	Italian, active Siena by 1298–died 1326/31	Italian	Siena	TRUE	Italian	Siena	TRUE
9	437650	European Paintings	Painting, part of a p	Madonna and	Segna di Buonaventura	Italian, active Siena by 1298–died 1326/31	Italian	Siena	TRUE	Italian	Siena	TRUE
10	437651	European Paintings	Painting, part of a p	Saint John the	Segna di Buonaventura	Italian, active Siena by 1298–died 1326/31	Italian	Siena	TRUE	Italian	Siena	TRUE
11	437240	European Paintings	Painting, diptych	Saint John on	Pacino di Bonaguida	Italian, Florence 1280–ca. 1340	Italian	Florence	TRUE	Null	Null	Null
12	437063	European Paintings	Painting	Madonna and	Lippo Memmi (Filippo di N	Italian, Sienese, 1291–died 1356,Sienese	Italian	Sienese	TRUE	Italian	Sienese	TRUE
13	437064	European Paintings	Painting, part of an	Saint Clare	Lippo Memmi (Filippo di N	Italian, Sienese, active by 1317–died 1356	Italian	Sienese	TRUE	Italian	Sienese	TRUE
14	437065	European Paintings	Painting, part of an	Saint Paul	Lippo Memmi (Filippo di N	Italian, Sienese, active by 1317–died 1356	Italian	Sienese	TRUE	Italian	Sienese	TRUE
15	436430	European Paintings	Painting, altarpiece	Madonna and	Taddeo Gaddi	Italian, Florentine, 1290–died 1366, Florence	Italian	Florence	TRUE	Italian	Florence	TRUE
16	436602	European Paintings	Painting	Madonna and	Guariento di Arpo	Italian, Piove di Sacco,1310–died 1370,Padua	Italian	Piove di Sacco	TRUE	Italian	Padua	TRUE
17	437866	European Paintings	Painting	Madonna and	Lippo Vanni (Lippo Vanni	Italian, Sienese, 1315–1375	Italian	Siena	TRUE	Null	Null	Null
18	437744	European Paintings	Painting, procession	Saint Mary Ma	Spinello Aretino (Spinello	Italian, born Arezzo 1345–52, died 1410 Arezzo	Italian	Arezzo	TRUE	Italian	Arezzo	TRUE
19	436920	European Paintings	Painting	Madonna and	Luca di Tommè di Nuto	Italian, Sienese, active 1356–89	Italian	Siena	TRUE	Italian	Null	Null
20	437774	European Paintings	Painting, predella	Christ and the	Taddeo di Bartolo	Italian, Siena ca. 1362–1422 Siena	Italian	Siena	TRUE	Italian	Siena	TRUE
21	436050	European Paintings	Painting, part of an	Saint Lucy and	Giovanni di Bartolomeo C	Italian, Pistoia, 1340–1398	Italian	Pistoia	TRUE	Italian	Null	Null
22	435863	European Paintings	Painting	Saint Catherin	Cenni di Francesco di Se	Italian, Florence, active by 1369–died 1415	Italian	Florence	TRUE	Italian	Florence	TRUE
23	437248	European Paintings	Painting	Madonna and	Paolo di Giovanni Fei	Italian, Siena, 1345–died 1411,Siena, Italy	Italian	Siena	TRUE	Italian	Siena	TRUE
24	436911	European Paintings	Painting	Abraham	Lorenzo Monaco (Piero d	Italian, Siena ca. 1370–1425 Florence	Italian	Siena	TRUE	Italian	Florence	TRUE
25	436912	European Paintings	Painting	David	Lorenzo Monaco (Piero d	Italian, Siena ca. 1370–1425 Florence	Italian	Siena	TRUE	Italian	Florence	TRUE

1. Uncertainty of Data

Giotto di Bondone	Italian, Florentine, 1266/76–1337
Bernardo Daddi	Italian, Florence (?) ca. 1290–1348 Florence
Lippo di Benivieni	Italian, Florentine, active 1296–1327



	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	deathCity	DPCertainty	birthAndDeath	artistBeginDate	BDCertainty	artistEndDate	DDCertainty	LifeSpan	objectYear	objectLength	objectBeginDate	objectEndDate	objectDate	medium		
2	Florence	TRUE	TRUE	1266	TRUE	1337	TRUE	71	49	10	1315	1325	possibly ca. 1320	Tempera on wood	Paintings	http://www.me
3	Florence	TRUE	TRUE	1290	FALSE	1348	TRUE	58	30	10	1320	1330	ca. 1325	Tempera on wood	Paintings	http://www.me
4	Florence	TRUE	TRUE	1290	FALSE	1348	TRUE	58	43	10	1333	1343	ca. 1338–40	Tempera on wood	Paintings	http://www.me
5	Florence	TRUE	TRUE	1290	FALSE	1348	TRUE	58	37	21	1327	1348	ca. 1338–41	Tempera on wood	Paintings	http://www.me
6	Florence	TRUE	TRUE	1290	FALSE	1348	TRUE	58	37	21	1327	1348	ca. 1338–42	Tempera on wood	Paintings	http://www.me
7	Florence	TRUE	TRUE	1296	FALSE	1327	TRUE	31	0	31	1296	1327	ca. 1338–43	Tempera on wood	Paintings	http://www.me
8	Siena	TRUE	TRUE	1298	FALSE	1331	TRUE	33	8	10	1306	1316	ca. 1311	Tempera on wood	Paintings	http://www.me
9	Siena	TRUE	TRUE	1298	FALSE	1331	TRUE	33	17	10	1315	1325	ca. 1320	Tempera on wood	Paintings	http://www.me
10	Siena	TRUE	TRUE	1298	FALSE	1331	TRUE	33	17	10	1315	1325	ca. 1320	Tempera on wood	Paintings	http://www.me
11	Null	Null	Null	1280	TRUE	1340	TRUE	60	23	17	1303	1320	ca. 1321	Tempera on wood	Paintings	http://www.me
12	Sienese	TRUE	TRUE	1291	TRUE	1356	TRUE	65	54	10	1345	1355	ca. 1350	Tempera on wood	Paintings	http://www.me
13	Sienese	TRUE	TRUE	1291	TRUE	1356	TRUE	65	34	10	1325	1335	ca. 1330	Tempera on wood	Paintings	http://www.me
14	Sienese	TRUE	TRUE	1291	TRUE	1356	TRUE	65	34	10	1325	1335	ca. 1330	Tempera on wood	Paintings	http://www.me
15	Florence	TRUE	TRUE	1290	TRUE	1366	TRUE	76	45	10	1335	1345	ca. 1340	Tempera on wood	Paintings	http://www.me
16	Padua	TRUE	FALSE	1310	TRUE	1370	TRUE	60	28	32	1338	1370	ca. 1341	Tempera on wood	Paintings	http://www.me
17	Null	Null	Null	1315	TRUE	1375	TRUE	60	26	34	1341	1375	ca. 1342	Tempera on wood	Paintings	http://www.me
18	Arezzo	TRUE	TRUE	1345	TRUE	1410	TRUE	65	50	5	1395	1400	ca. 1395–1400	Tempera on canvas	Paintings	http://www.me
19	Null	Null	Null	1356	FALSE	1389	FALSE	33	4	5	1360	1365	ca. 1360–65	Tempera on wood	Paintings	http://www.me
20	Siena	TRUE	TRUE	1362	TRUE	1422	TRUE	60	33	10	1395	1405	ca. 1400	Tempera on wood	Paintings	http://www.me
21	Null	Null	Null	1340	TRUE	1398	TRUE	58	27	31	1367	1398	ca. 1401	Tempera on wood	Paintings	http://www.me
22	Florence	TRUE	TRUE	1369	FALSE	1415	FALSE	46	6	10	1375	1385	possibly ca. 1380	Tempera on wood	Paintings	http://www.me
23	Siena	TRUE	TRUE	1345	TRUE	1411	TRUE	66	25	9	1370	1379	1370s	Tempera on wood	Paintings	http://www.me
24	Florence	TRUE	FALSE	1370	FALSE	1425	FALSE	55	38	2	1408	1410	ca. 1408–10	Tempera on wood	Paintings	http://www.me
25	Florence	TRUE	FALSE	1370	FALSE	1425	FALSE	55	38	2	1408	1410	ca. 1408–10	Tempera on wood	Paintings	http://www.me

2. Wrong Records

artistAlphaSort	artistDisplayBio	birthCountry	artistBeginDate	artistEndDate	artistLifeSpan
Steenwijck, Hendrick van, II	Flemish, Antwerp (?) ca. 1580–1649 Leiden	Flemish	1475	1649	174
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Raeburn, Henry, Sir	British, Stockbridge, Scotland 1756–1823 Edinburgh, Scotland	British, Scottish	1756	1923	167
Italian (Ferrarese) Painter	late 16th century	Italian	1400	1499	99 late
Italian (Ferrarese) Painter	second quarter 16th century	Italian	1400	1499	99 nd quarte
Master of the Saint Ursula Legend	Netherlandish, active late 15th century	Netherlandish	1400	1499	99
Master of the Saint Ursula Legend	Netherlandish, active late 15th century	Netherlandish	1400	1499	99
Bouts, Aelbert	Netherlandish, Leuven ca. 1451/54–1549	Netherlandish	1451	1549	98
Harpignies, Henri-Joseph	French, Valenciennes 1819–1916 Saint-Privé	French	1819	1916	97
Chéret, Jules	French, Paris 1836–1932 Nice	French	1836	1932	96
Humbert, Ferdinand	French, 1842–1934	French	1842	1934	92
Pécheux, Laurent	French, Lyons 1729–1821 Turin	French	1729	1821	92

3. Need Background Information

	<i>fx</i>	Master of the Magdalen				
1		▶	E	F	G	
				artistAlphaSort	artistDisplayBio	
1		artistDisplayName				
2		Master of the Magdalen		Master of the Magdalen	Italian, Florence, active 1265–95	
3		Master of the Magdalen		Master of the Magdalen	Italian, Florence, active 1265–95	
4		Master of the Magdalen		Master of the Magdalen	Italian, Florence, active 1265–95	
5		Giotto di Bondone		Giotto di Bondone	Italian, Florentine, 1266/76–1337	
6		Bernardo Daddi		Daddi, Bernardo	Italian, Florence (?) ca. 1290–1348 Florence	
7		Bernardo Daddi		Daddi, Bernardo	Italian, Florence (?) ca. 1290–1348 Florence	
8		Bernardo Daddi		Daddi, Bernardo	Italian, Florence (?) ca. 1290–1348 Florence	
9		Bernardo Daddi		Daddi, Bernardo	Italian, Florence (?) ca. 1290–1348 Florence	
10		Lippo di Benivieni		Lippo di Benivieni	Italian, Florentine, active 1296–1327	
11		Segna di Buonaventura		Segna di Buonaventura	Italian, active Siena by 1298–died 1326/31	

3. Need Background Information

The Master of the Magdalen is the name given by Osvald Sirén (1922) to the anonymous artist who painted a panel in the Galleria dell'Accademia in Florence representing Saint Mary Magdalen and eight episodes of her life, and a group of stylistically related paintings. The finest of these pictures date from the last third of the thirteenth century and reflect the work of Cimabue—the most important Florentine painter prior to Giotto. The MMA panel is a fragment and includes, in addition to the head of the Virgin and her right hand holding a flower, the blessing hand and bent knee of the Christ Child. The keyhole-shaped fragment was presumably cut from a large panel of the Madonna and Child enthroned of the sort known as a *Maestà*—the Madonna in Majesty. It was fairly common practice to salvage the head of the Madonna in a work of art that had gone out of style but had become an object of veneration. It would then have been incorporated, like a relic, into a

4. References from Other Resources

	E	F	G
1	artistDisplayName	artistAlphaSort	artistDisplayBio
2	Giotto di Bondone	Giotto di Bondone	Italian, Florentine, 1266/76–1337
▲ 3	Bernardo Daddi	Daddi, Bernardo	Italian, Florence (?) ca. 1290–1348 Florence
▼ 7	Lippo di Benivieni	Lippo di Benivieni	Italian, Florentine, active 1296–1327
▲ 8	Segna di Buonaventura	Segna di Buonaventura	Italian, active Siena by 1298–died 1326/31
▼ 11	Pacino di Bonaguida	Pacino di Bonaguida	Italian, active Florence 1302–ca. 1340
12	Lippo Memmi (Filippo di Memmo)	Memmi, Lippo (Filippo di Memmo)	Italian, Sienese, active by 1317–died 1356
13	Lippo Memmi (Filippo di Memmo)	Memmi, Lippo (Filippo di Memmo)	Italian, Sienese, active by 1317–died 1356
14	Lippo Memmi (Filippo di Memmo)	Memmi, Lippo (Filippo di Memmo)	Italian, Sienese, active by 1317–died 1356

Lippo Memmi

From Wikipedia, the free encyclopedia

Lippo Memmi (c. 1291 – 1356) was an [Italian](#) painter from [Siena](#). He was the foremost follower of [Simone Martini](#), who was his brother-in-law.

Together with Martini, in 1333 he painted what is regarded as one of the masterworks of the International Gothic, the [Annunciation with St. Margaret and St. Ansanus](#) (now in the [Uffizi](#)), probably mainly working on the two saints. He was one of the artists who worked at [Orvieto Cathedral](#), for which he finished the [Virgin of Mercy](#) ("Madonna dei Raccomandati"). Later he followed Martini to the [Papal court in Avignon](#), where he worked until the mid-14th century. After his return to Siena, Memmi continued to work until his death in 1356.

Memmi's famed artwork, *La Madonna della Febbre* was the first venerated image of the [Blessed Virgin Mary](#) granted with a [Canonical coronation](#) by a [Pope](#) on 27 May 1631. The image has long been since held miraculous and is enshrined at the [Sacristy](#) chapel of the [Blessed Sacrament](#) inside [Saint Peter's Basilica](#) in [Rome](#).

Lippo Memmi



Contents [\[hide\]](#)

1 Style

2 Attribution and artistic sources

PART 3

Implementation

script.js

Users > mochi > Desktop > MET project > **JS** script.js > ...

```
62
63     tooltip = d3.select('body')
64         .append('div')
65         .style('position', 'absolute')
66         .style('padding', '0 10px')
67         .style('background', 'white')
68         .style('opacity', 0);
69
70
71 // bars for lifespan
72 d3.select('#viz')
73     .append('svg')
74     .attr('width', width + margin.left + margin.right)
75     .attr('height', height + margin.top + margin.bottom)
76     .style('background', '#d7e0dc')
77 // .style('background', '#c9D7D6')
78     .append("g")
79     .attr("transform", "translate(" + margin.left + "," + margin.top + ")")
80     .selectAll('rect')
81         .data(bardata)
82         .enter()
83         .append('rect')
84             .attr('fill',function(d) {
85                 return colors(d);
86             })
87             // .style('opacity',0.7)
88             .attr('width',barwidth)
89             .attr('height', function(d){
90                 return yScale(d);
91             })
92             .attr('x', function(d,i){
93                 return i*(barwidth + barOffset);
94                 // return xScale(d);
95             })
96             .attr('y',function (d,i) {
97                 return height-yScale(d);
98             })
99             .attr ('rx',3)
100
101
```

Lives' Dimensions of 51 Artists in European Paintings Department at Met Museum



Ultramarine

#120a8f

It's a deep blue color pigment which was originally made by grinding lapis lazuli into a powder. Ultramarine was the **finest and most expensive blue** used by Renaissance painters. It was often used for the robes of the Virgin Mary, and symbolized holiness and humility.

Verdigris

#43b3ae

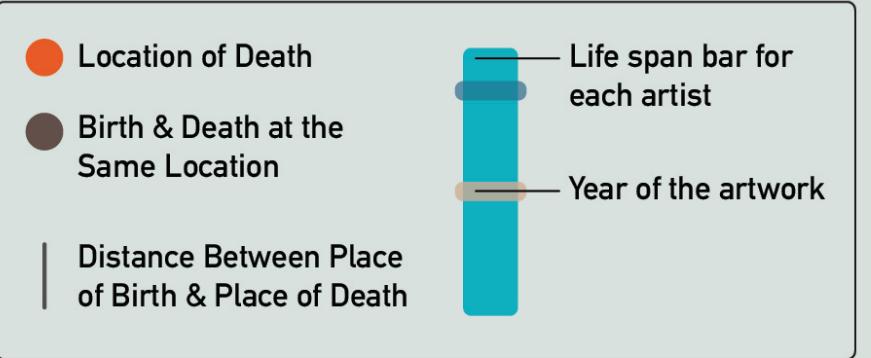
The vivid green color of copper(II) acetate made this form of verdigris a much used pigment. Until the 19th century, verdigris was the **most vibrant green** pigment available and was frequently used in painting.

Naples Yellow

#DEAE4B

Although painting techniques improved immeasurably during the Renaissance, the Renaissance palette mirrored that of the Medieval Age but for three pigments: **Naples Yellow**, Smalt and Carmine Lake.

Live's Dimensions of 51 Artists in European Paintings Department at Met Museum



/ Modifications I made

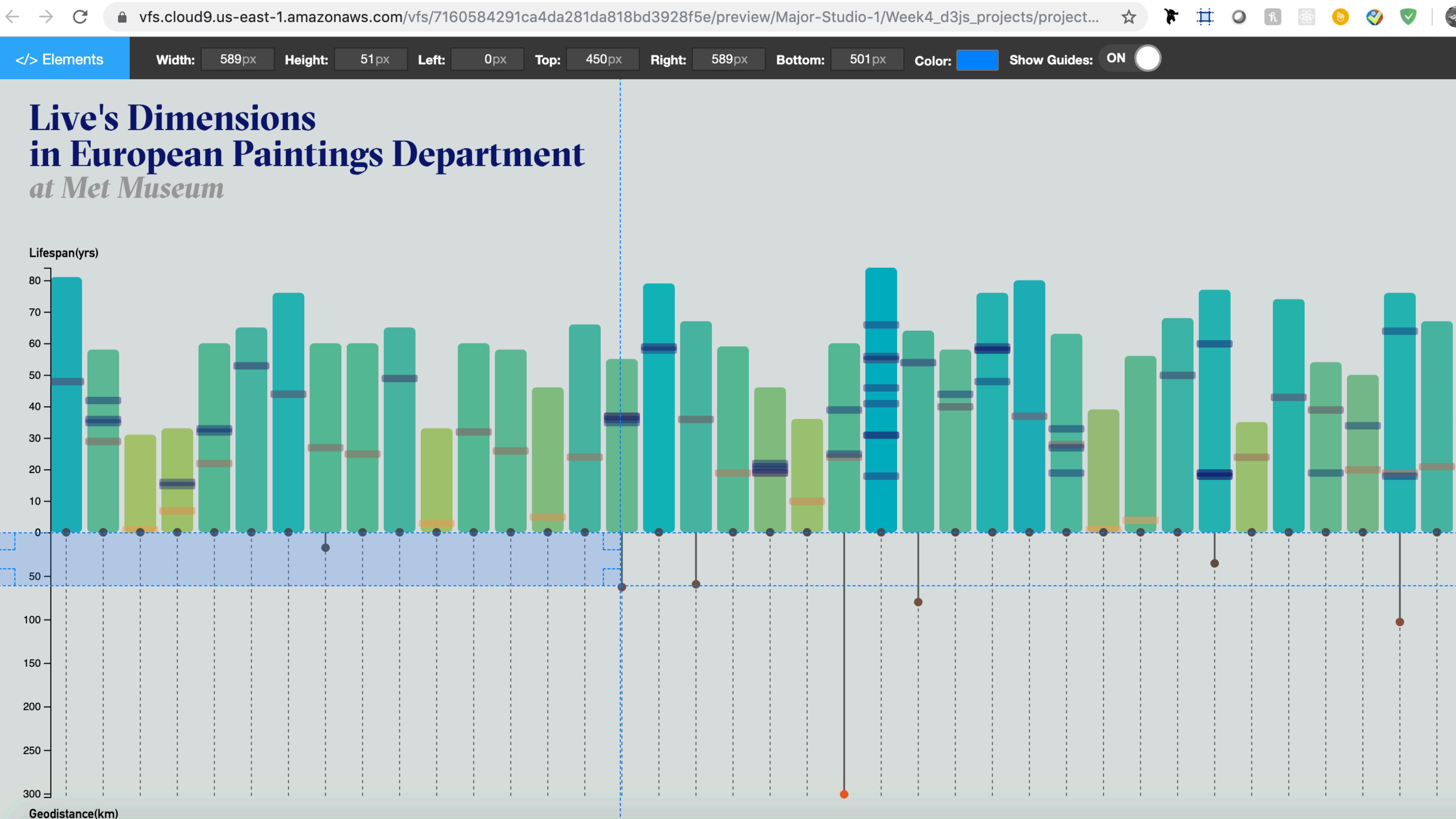
1. Top y-axis was changed from year to **lifespan years** because my sample size is small so the year wouldn't add more information.
2. Added **tooltip** so it's easier to see the number of each lifespan bar (also because I tried to add horizontal referencing lines but thought it's too much visual noises)
3. Added **uncertainty box** to each artist because there is no 100% certainty about the lifespan is correct due to the lack of information.

PART 4

Conclusions

/ Some Reflections...

1. There are still lots of things I wish I could achieve through **d3 js**, such as align artists' names vertically instead of occupying the below area, and in that way it would be more relatable to the graphics.
2. As I was looking at **artists' bios** from other resources, some artists' lifespan (mostly famous ones) are recorded down to months and days while most artists don't even have an accurate record on years.
3. I should **study the data** thoroughly first before making design sketches otherwise there are a lot of unexpected factors...
4. What if Met and other museums / libraries / institutions **share the informations** together? Then we might be able to access to the data from the same place.



Thank You

Xingwei Huang

Sep 24th, 2019