



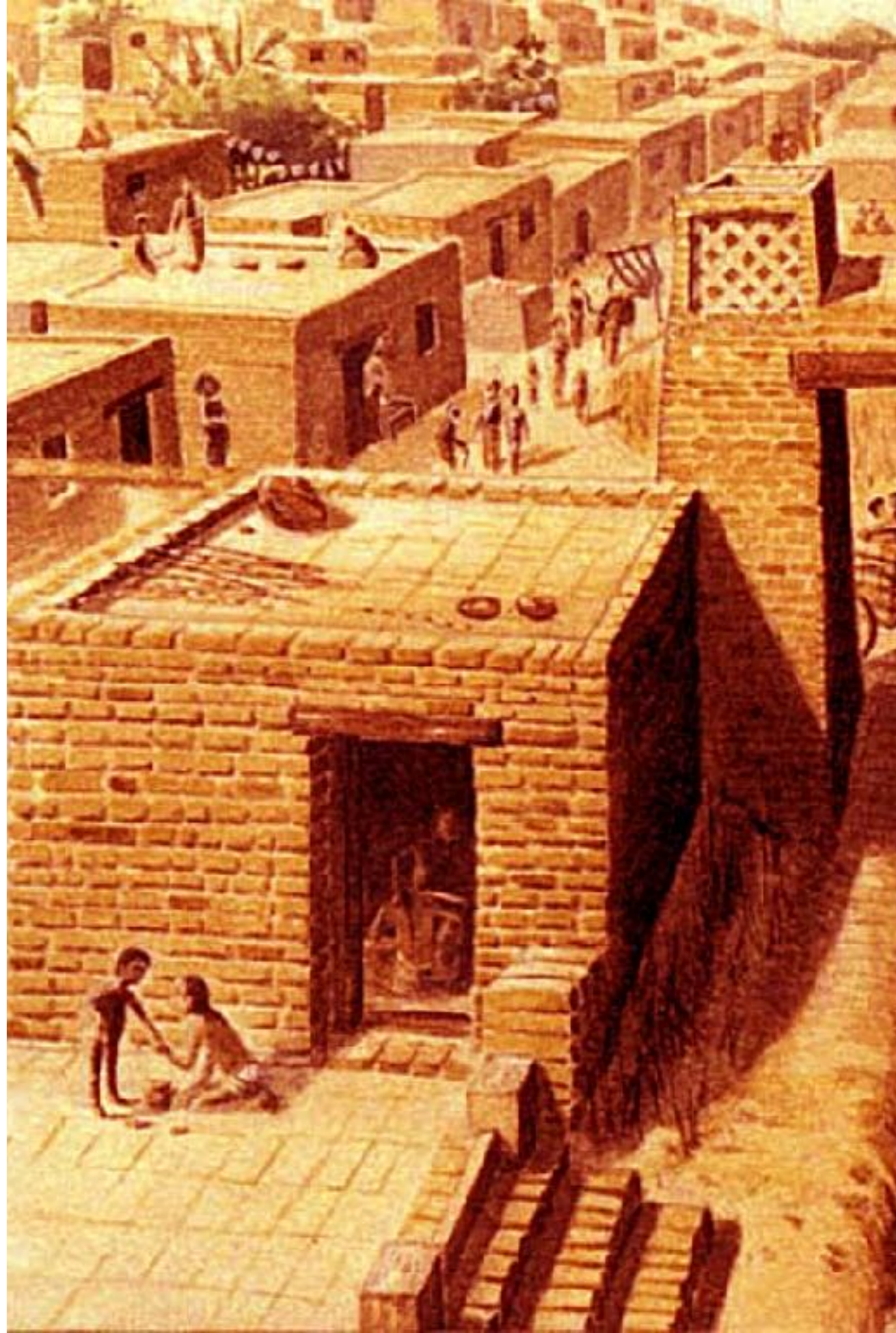
Health Inequality in Post-  
Medieval Netherlands  
(1650-1850)

Dr. Sarah Schrader  
Leiden University

# Archaeology of Inequality

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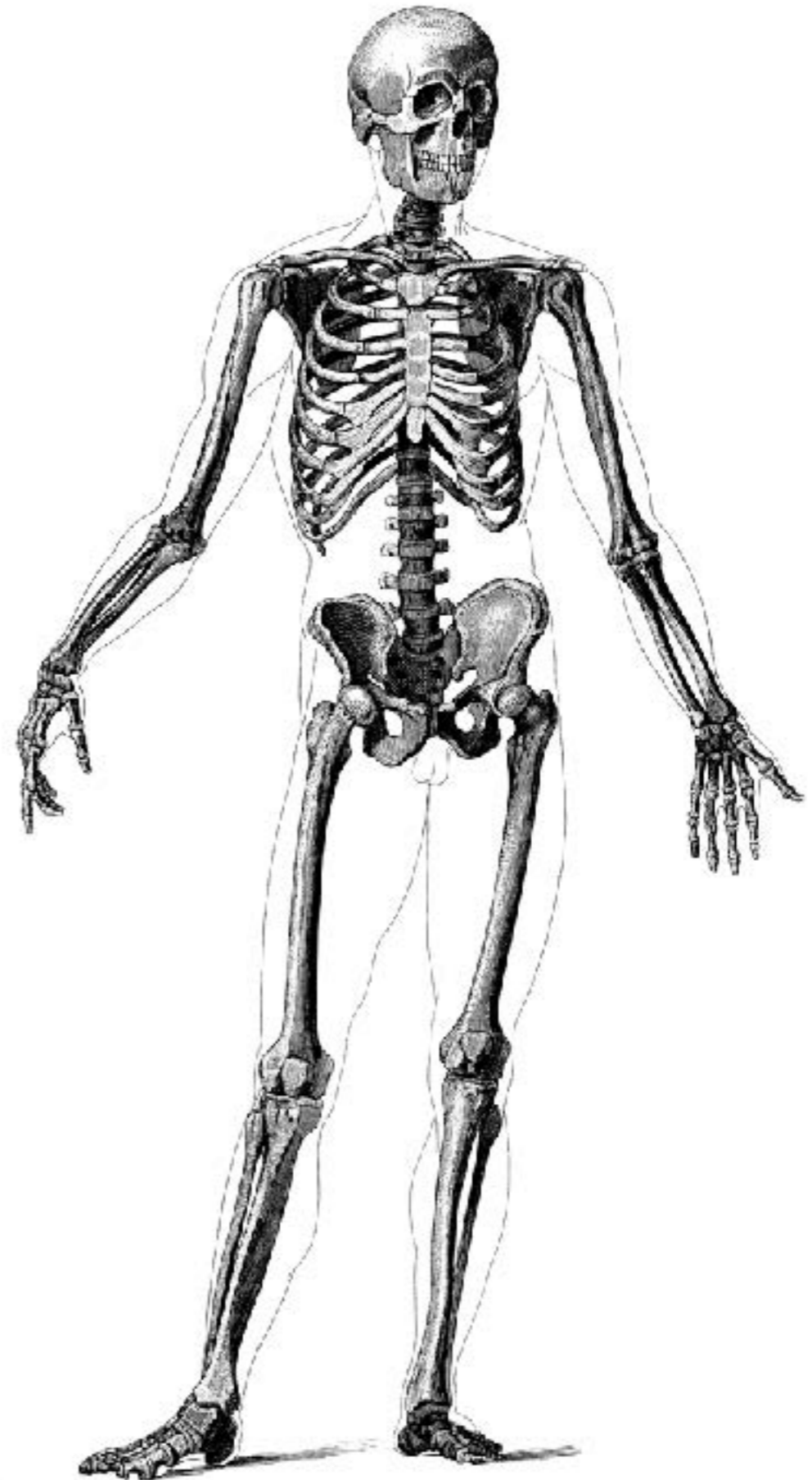
- “Big Theories” of emergence of inequality
- Rise of civilization model
- Hybridity model
- Health inequality often framed as structural violence



# Bioarchaeological Methods

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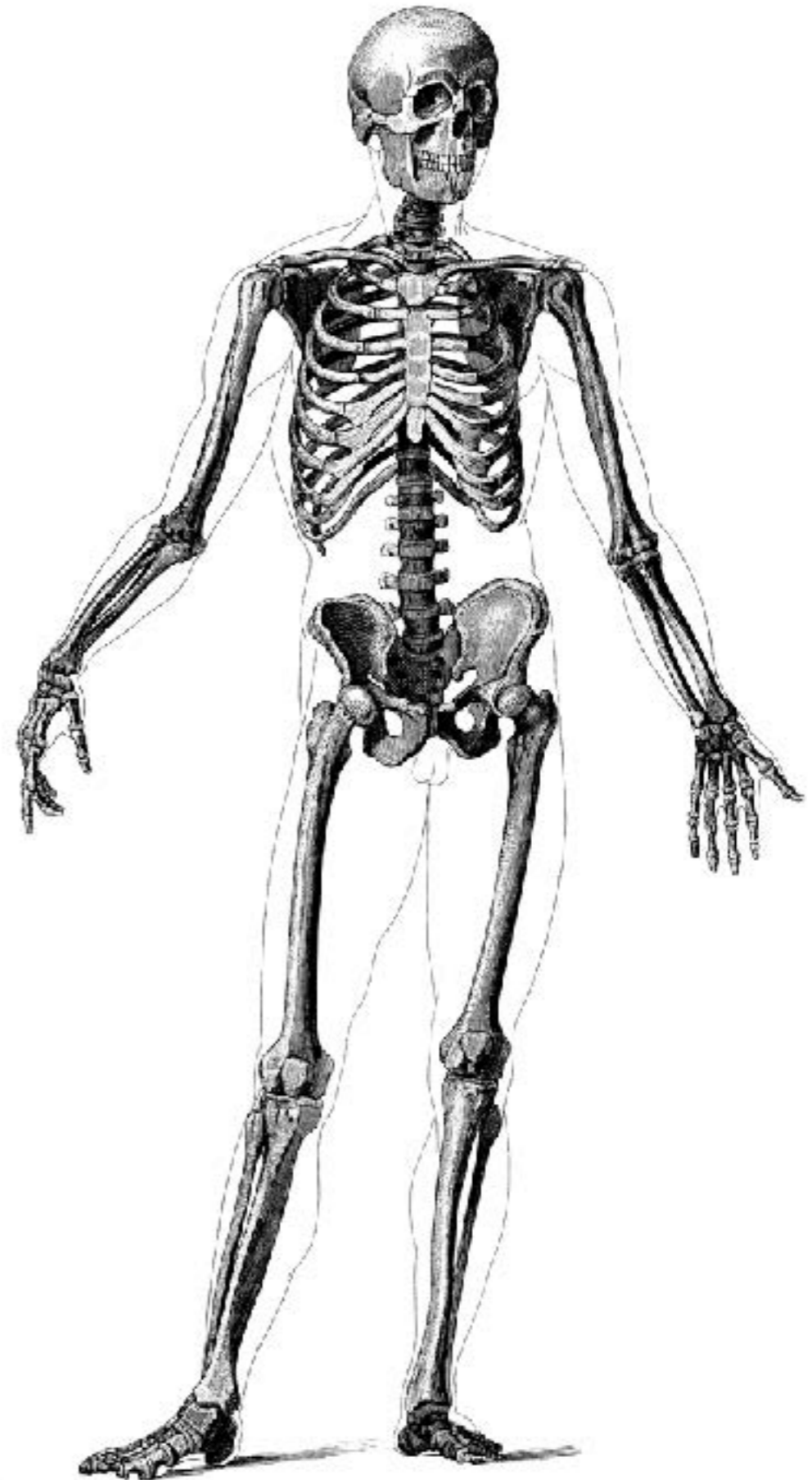
- Stature
- Age-at-death estimations
- Sex estimation
- Specific diseases
- Non-specific diseases
- We rely heavily on archaeological context



# Bioarchaeological Limitations

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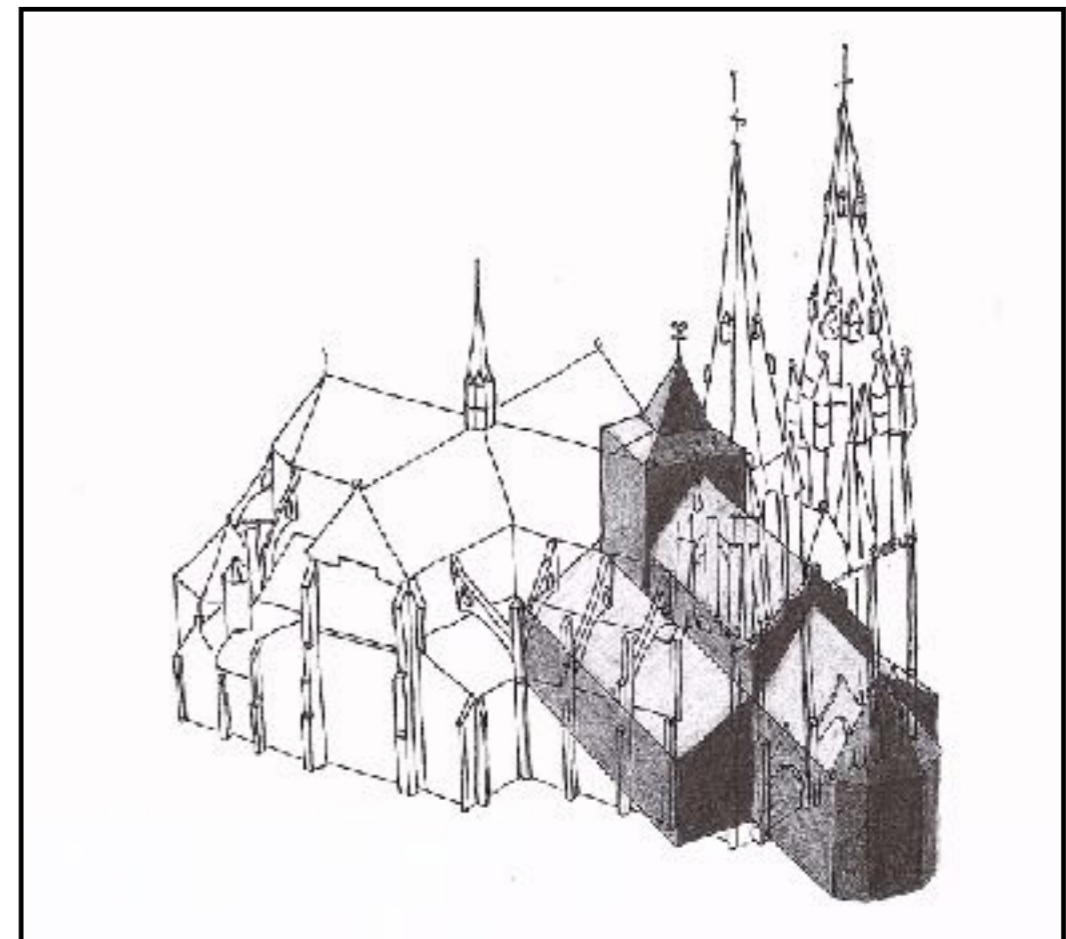
- Preservation bias
- Excavation bias
- “The Osteological Paradox”
- Sample sizes

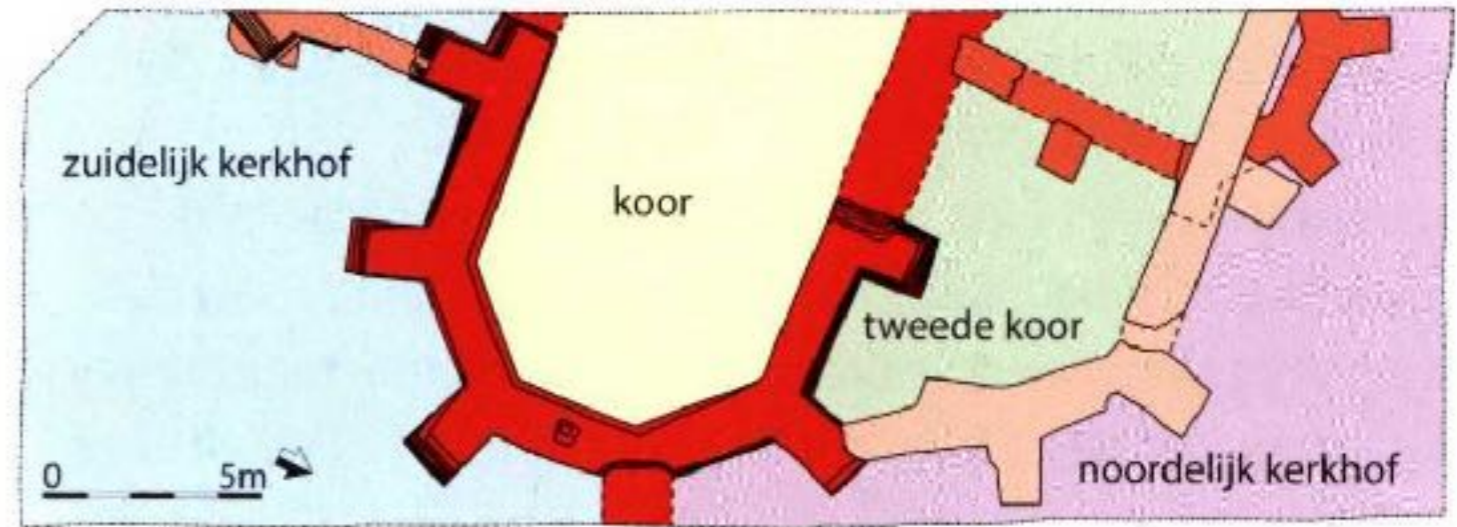


# Eindhoven

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- Sint-Catharinakerk
- 1350-1850
- Urban

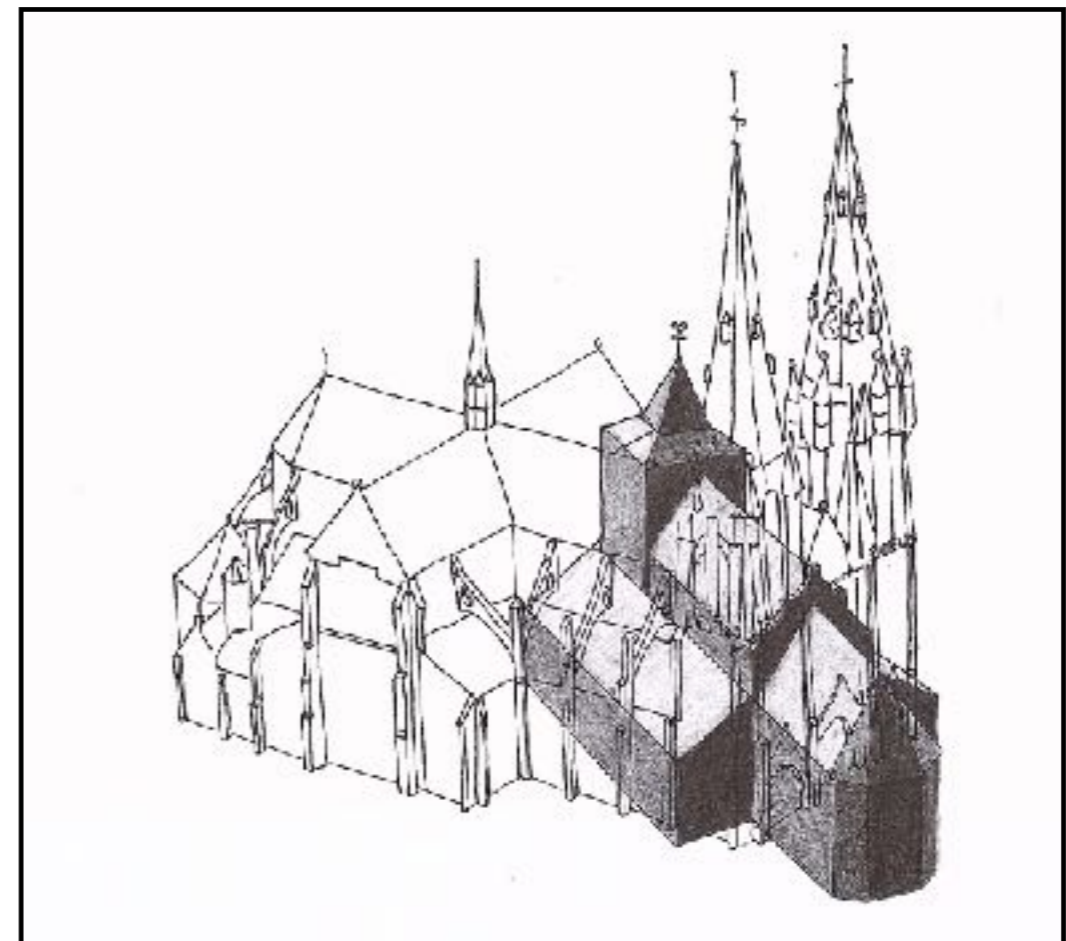




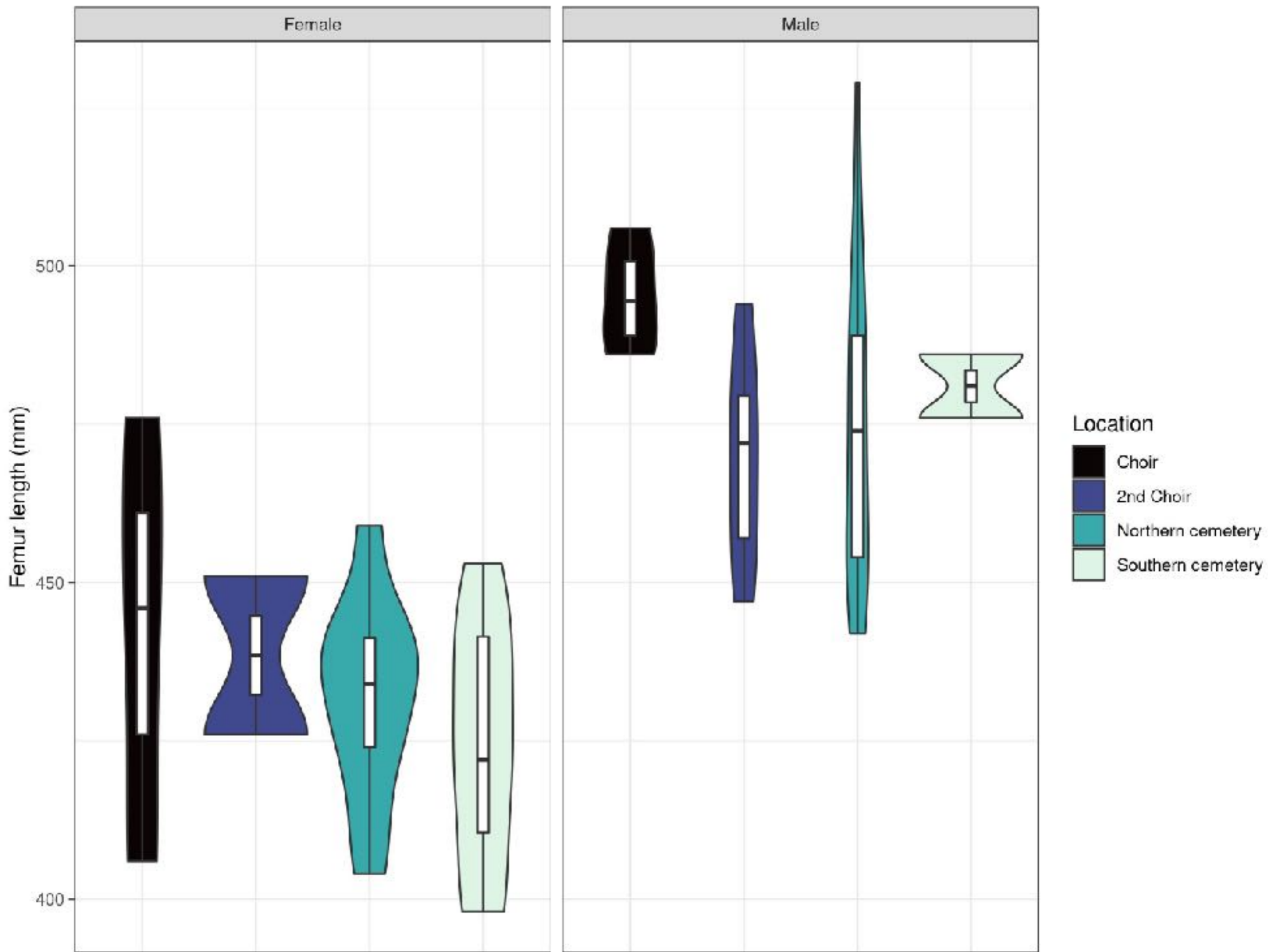
Nollen 2013:49

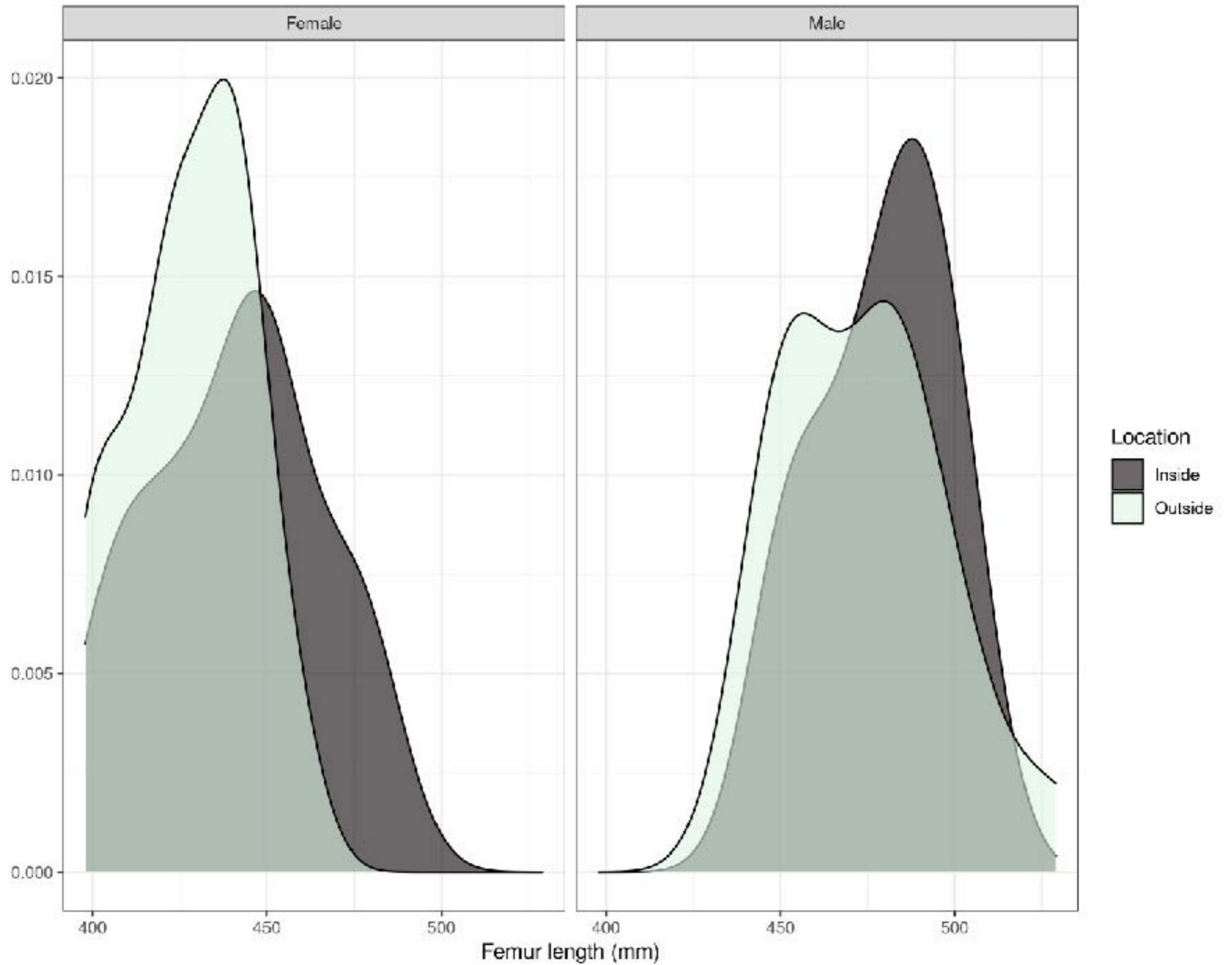
# Eindhoven

- Sint-Catharinakerk
- 1350-1850
- Urban
- Choir + Second choir = Inside
- Southern + Northern = Outside
- Age at death (transition analysis)
- Femoral length as a proxy for stature

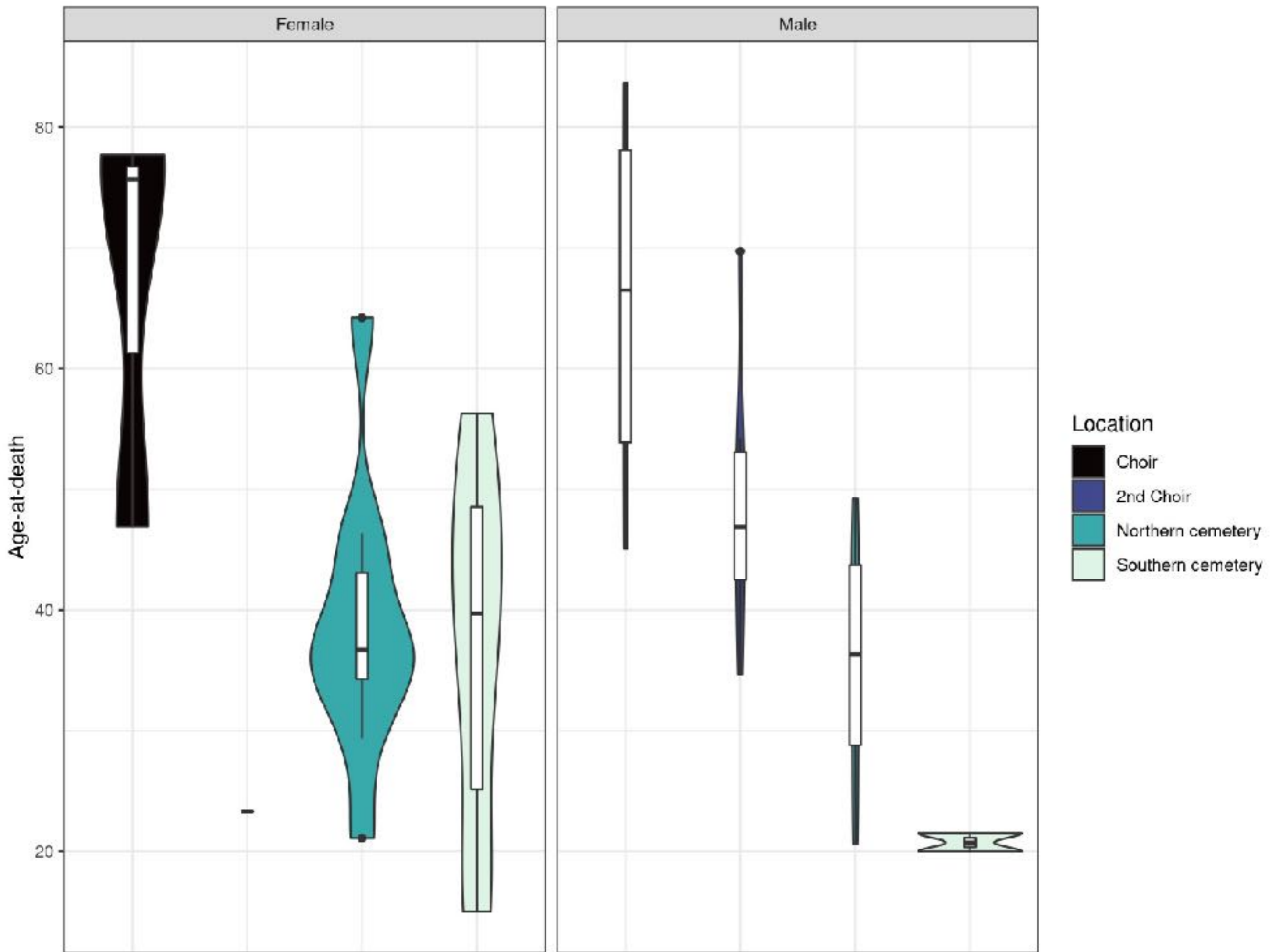


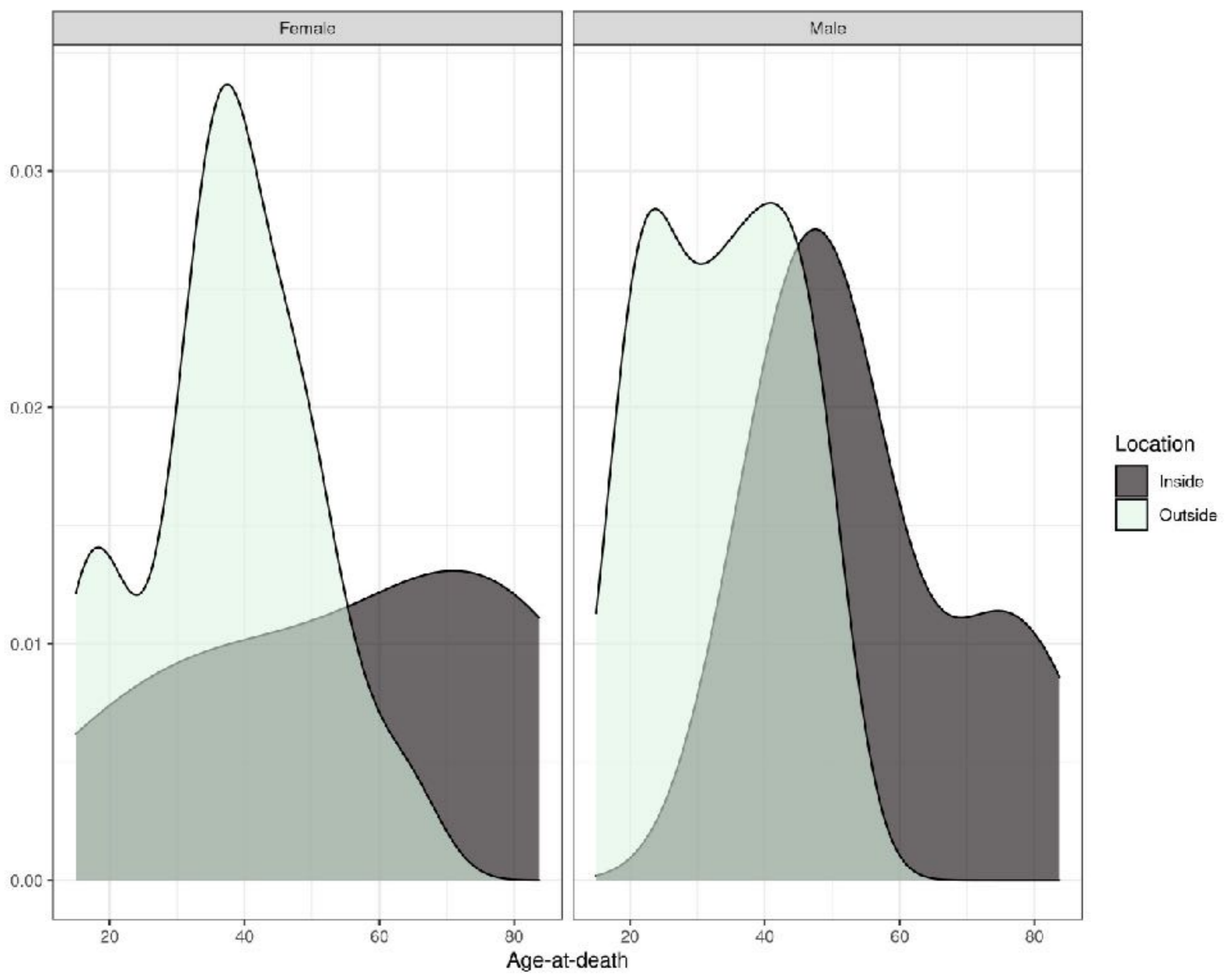
Arts 2002:24



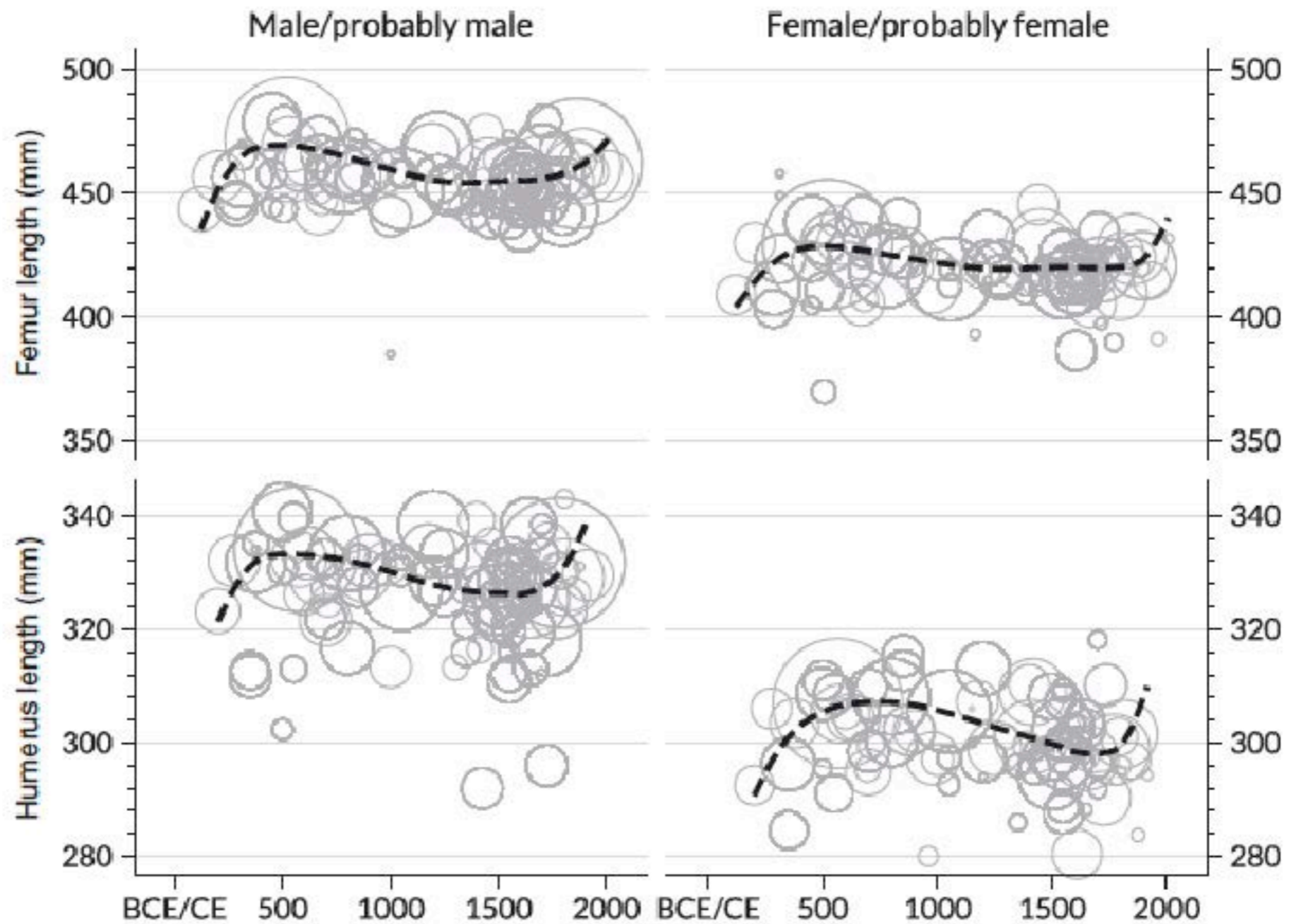




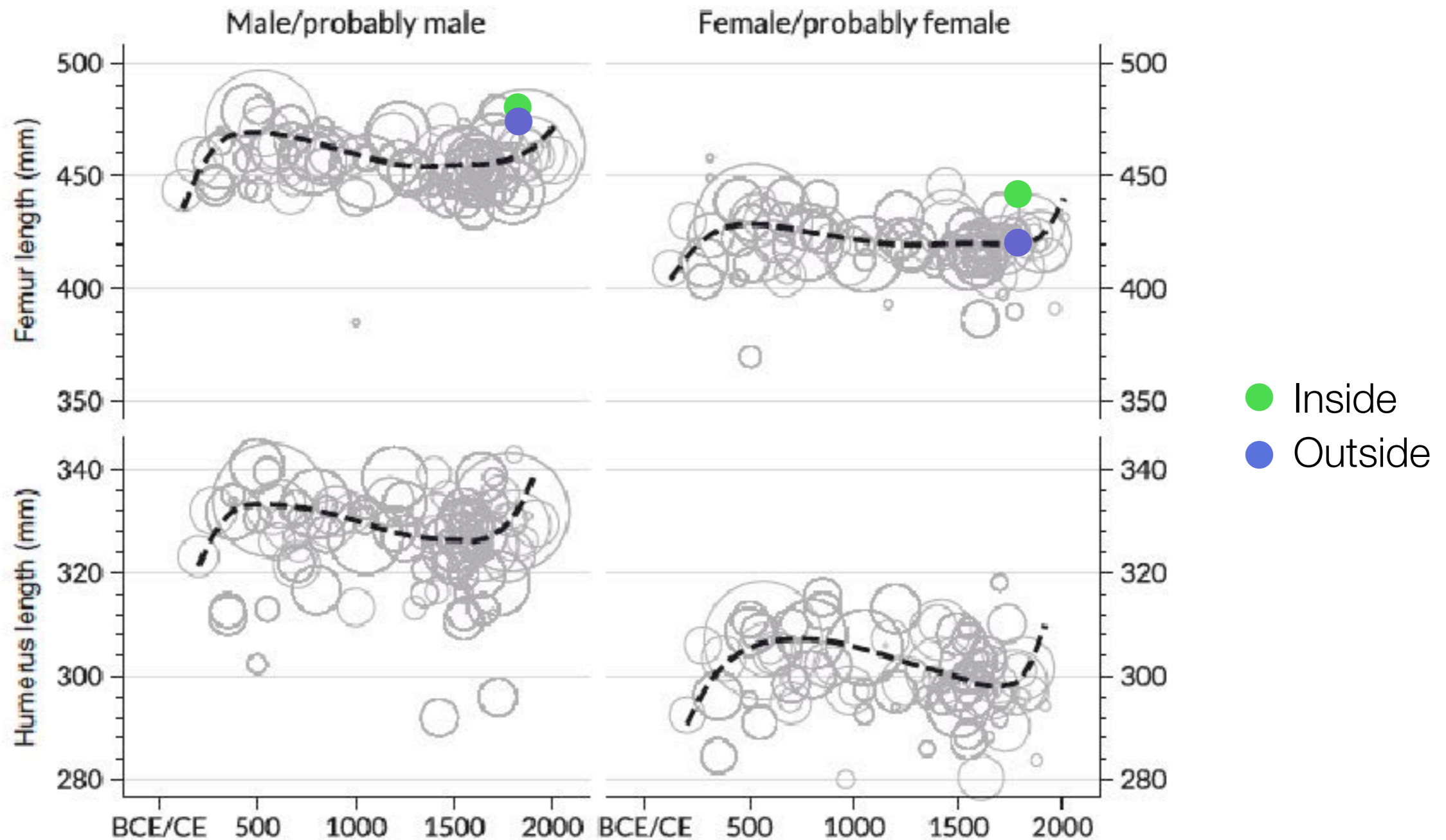




# Estimated Height Trends in Europe



# Estimated Height Trends in Europe



# Male Stature in the Netherlands

Table 1. Average stature of males in the Netherlands (calculated, *in situ* measurement\*, corrected cadaveric length\*\*, live)

Cemetery	Period AD	Population	Stature (cm)	SD	<i>n</i>	Means of stature assessment
Valkenburg <sup>1</sup>	50–225	Indigenous	175.9	6.2	10	Calculated from long bones <sup>19</sup>
Oosterbeintum <sup>2</sup>	450–750	Indigenous	174.0	.	7	Calculated from long bones <sup>19</sup>
Susteren <sup>3</sup>	800–1100	Monks	172.5	.	13	Calculated from long bones <sup>20</sup>
Maastricht <sup>4</sup>	1070–1521	Canons	173.9	3.9	23	Calculated from long bones <sup>20</sup>
Hellevoetsluis <sup>5</sup>	1250–1300	Agricultural	172.4	6.2	55	Calculated from long bones <sup>19</sup>
Delft <sup>6</sup>	1265–1433	Citizens	170.5	4.6	25	Calculated from long bones <sup>20</sup>
Dordrecht <sup>7</sup>	1275–1572	Citizens	170.6	3.8	80	Calculated from long bones <sup>20</sup>
Delft <sup>6</sup>	1433–1652	Citizens	168.9	3.4	19	Calculated from long bones <sup>20</sup>
Gorinchem <sup>8</sup>	1455–1572	Citizens	169.7	3.8	11	Calculated from long bones <sup>20</sup>
Breda <sup>8</sup>	1600–1824	Citizens	171.3	4.4	19	Calculated from long bones <sup>20</sup>
Spitsbergen <sup>9</sup>	1642–1800	Whalers	166.0	6.9	41	<i>In situ</i> measurement
Leiden <sup>9</sup>	1650–1800	Citizens	166.7***	9.3	102	<i>In situ</i> measurement
Zwolle <sup>10</sup>	1725–1828	Citizens	172.9	.	33	Calculated from long bones <sup>19</sup>
Alkmaar <sup>11</sup>	1725–1828	Citizens	170.0	.	70	Calculated from long bones <sup>20</sup>
Seven cities <sup>12</sup>	1825	City militias	169.0	.	382	Live
's-Hertogenbosch <sup>13</sup>	1830–1858	Citizens	169.6	4.4	82	Calculated from long bones <sup>20</sup>
Seven cities <sup>12</sup>	1865	City militias	167.5	.	722	Live
Leiden <sup>14</sup>	1880–1930	Citizens	166.0	7.9	86	Cadaveric measurement
Nationwide <sup>15</sup>	1955	Civilians	175.5	6.7	1213	Live
Nationwide <sup>16</sup>	1965	Civilians	178.0	.	391	Live
Nationwide <sup>17</sup>	1980	Civilians	182.0	.	3233	Live
Nationwide <sup>18</sup>	1997	Civilians	184.0	.	900	Live

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# Conclusions

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- Skeletal material has limitations, however, it can also be a very useful resource when studying the long history of embodied inequality
- Future Research:
  - Entire Eindhoven collection
  - Children as non-survivors
  - Additional comparative collections
  - More direct comparison with historical and modern data



# Thank you!

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- Eindhoven community
- Dr. Nico Arts
- Gemeente Eindhoven
- ESOF Organizers
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