Appendix: The Medieval book hand data set

The data set is available open-source from URL https://doi.org/10.5281/zenodo.1202106. The first 10 images in the image sequences for each Cod. Sang. hand were used during the development/tuning phase and the following 10 images provided data for the final evaluation, e.g. pages 147–156 and 157–166, respectively, for scribe (8). For the sake of the consistency of the data set, the Scandinavian hands are also represented by 20 images, but, as for the Cod. Sang. data, only the last 10 were consulted in the final evaluation.

For the e-codices manuscripts (all from the St. Gallen Stiftsbibliothek), the hand metadata were provided by descriptions published by the website. For the other manuscripts, there is a comment on the origin of the hand metadata on each post. Works cited in connection with them are listed below. The data were (re)downloaded on 6–12 March 2018. (Source citations for e-codices as required by their Terms of Use.)

Carolingian minuscule hands (9th century)

(1, csg0053) St. Gallen, Stiftsbibliothek, Cod. Sang. 53, pp. 21–40, (www.e-codices.unifr.ch), Sintram.

(2, csg0077) St. Gallen, Stiftsbibliothek, Cod. Sang. 77, pp. 11–30, (www.e-codices.unifr.ch), "von einem Schreiber".

(3, csg0078) St. Gallen, Stiftsbibliothek, Cod. Sang. 78, pp. 11–30, (www.e-codices.unifr.ch), "wohl von einem Schreiber" .

(4, csg0088) St. Gallen, Stiftsbibliothek, Cod. Sang. 88, pp. 11–30, (www.e-codices.unifr.ch), "Von Einer Hand".

(5, csg0089) St. Gallen, Stiftsbibliothek, Cod. Sang. 89, pp. 11–30, (www.e-codices.unifr.ch), "Von 1 Hand".

(6, csg0112) St. Gallen, Stiftsbibliothek, Cod. Sang. 112, pp. 1–20, (www.e-codices.unifr.ch), "Von Einer Hand".

(7, csg0186A) St. Gallen, Stiftsbibliothek, Cod. Sang. 186, pp. 3–22, (www.e-codices.unifr.ch), "von mindestens 2 Händen".

(8, csg0186B) St. Gallen, Stiftsbibliothek, Cod. Sang. 186, pp. 147–166, (www.e-codices.unifr.ch).

(9, csg0557) St. Gallen, Stiftsbibliothek, Cod. Sang. 557, pp. 101–120, (www.e-codices.unifr.ch), "von einer Hand".

(10, csg0562A) St. Gallen, Stiftsbibliothek, Cod. Sang. 562, pp. 4–23, (www.e-codices.unifr.ch), "von zwei [...] Händen ".

(11, csg0562B) St. Gallen, Stiftsbibliothek, Cod. Sang. 562, pp. 95–114, (www.e-codices.unifr.ch).

(12, csg0565A) St. Gallen, Stiftsbibliothek, Cod. Sang. 565, pp. 72–91, (www.e-codices.unifr.ch), "Haupthand".

(13, csg0565B) St. Gallen, Stiftsbibliothek, Cod. Sang. 565, pp. 377–396, (www.e-codices.unifr.ch), "eine sehr originelle, noch karolingische [...] Hand".

(14, csg0569) St. Gallen, Stiftsbibliothek, Cod. Sang. 569, pp. 50–69, (www.e-codices.unifr.ch), Hand 2.

(15, csg0576) St. Gallen, Stiftsbibliothek, Cod. Sang. 576, pp. 97–116, (www.e-codices.unifr.ch), "wahrscheinlich von einer Hand".

(16, csg0861) St. Gallen, Stiftsbibliothek, Cod. Sang. 861, pp. 50–69, (www.e-codices.unifr.ch), "Von 1 regelm., schönen Hand".

(17, csg0902) St. Gallen, Stiftsbibliothek, Cod. Sang. 902, pp. 106–125, (www.e-codices.unifr.ch), one hand for that unit assumed by the current author.

(18, csg0926) St. Gallen, Stiftsbibliothek, Cod. Sang. 926, pp. 32–51, (www.e-codices.unifr.ch), "von Einer Hand".

Bastarda hands (15th century)

(19, csg0406) St. Gallen, Stiftsbibliothek, Cod. Sang. 406 , pp. 11–30, (www.e-codices.unifr.ch), Cordula von Schönau.

(20, csg0586) St. Gallen, Stiftsbibliothek, Cod. Sang. 586, pp. 11–30, (www.e-codices.unifr.ch), the "Standard description" proposes the alternative descriptions "Flüchtige Kursive" and "oberrheinische Bastarda mit schwäbischem Einschlag", by Friedrich Colners/Cölners.

(21, csg0593) St. Gallen, Stiftsbibliothek, Cod. Sang. 593, pp. 101–120, (www.e-codices.unifr.ch), Joachim Cuontz.

(22, csg0602) St. Gallen, Stiftsbibliothek, Cod. Sang. 602, pp. 421–440, (www.e-codices.unifr.ch), Cuonrad Sailer.

(23, csg0603A) St. Gallen, Stiftsbibliothek, Cod. Sang. 603, pp. 11–30, (www.e-codices.unifr.ch), Hand 1, Regina Sattler.

(24, csg0603B) St. Gallen, Stiftsbibliothek, Cod. Sang. 603, pp. 171–190, (www.e-codices.unifr.ch), Hand 2, "frakturnahe Bastarda", but see discussion in the main text.

(25, csg0603C) St. Gallen, Stiftsbibliothek, Cod. Sang. 603, pp. 464–483, (www.e-codices.unifr.ch), Hand 3, "sehr charakteristische, eckige Bastarda", but see discussion in the main text.

(26, csg0625) St. Gallen, Stiftsbibliothek, Cod. Sang. 625, pp. 38–57, (www.e-codices.unifr.ch), Johannes Frauendorffer.

(27, csg0644) St. Gallen, Stiftsbibliothek, Cod. Sang. 644, pp. 3–23 (p. 21 missing), (www.e-codices.unifr.ch), Melchior Ruopp.

(28, csg0718A) St. Gallen, Stiftsbibliothek, Cod. Sang. 718, pp. 31–51 (p. 41 missing), (www.e-codices.unifr.ch), "1. Hand".

(29, csg0718B) St. Gallen, Stiftsbibliothek, Cod. Sang. 718, pp. 131–150, (www.e-codices.unifr.ch), "2. Hand".

(30, csg0725) St. Gallen, Stiftsbibliothek, Cod. Sang. 725, pp. 11–30, (www.e-codices.unifr.ch), "von einer Hand".

(31, csg0726A) St. Gallen, Stiftsbibliothek, Cod. Sang. 726, pp. 7–26, (www.e-codices.unifr.ch), "1. Hand".

(32, csg0726B) St. Gallen, Stiftsbibliothek, Cod. Sang. 726, pp. 101–120, (www.e-codices.unifr.ch), "2. Hand".

(33, csg0983) St. Gallen, Stiftsbibliothek, Cod. Sang. 983, pp. 51–70, (www.e-codices.unifr.ch), Schwester Endlin.

(34, csg0990A) St. Gallen, Stiftsbibliothek, Cod. Sang. 990, pp. 221–240, (www.e-codices.unifr.ch), Dorothea von Hertenstein.

(35, csg0990B) St. Gallen, Stiftsbibliothek, Cod. Sang. 990, pp. 321–340, (www.e-codices.unifr.ch), Elisabeth Schaigenwiler.

(36, csg1869) St. Gallen, Stiftsbibliothek, Cod. Sang. 1869, pp. 11–30, (www.e-codices.unifr.ch), "von einer Hand".

Scandinavian hands (Various Scripts)

(37, uubB10) Uppsala University Library (ALVIN), B 10, spreads, (pp.) 170 verso–190 recto, one hand assumed by the current author.
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-90664.

(38, uubB49) Uppsala University Library (ALVIN), B 49, pp. 15 recto–24 verso, one hand assumed by the current author,
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-104126.

(39, uubB68) Uppsala University Library (ALVIN), B 68, pp. 9 recto–18 verso, one hand assumed by the current author.
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-73176.

(40, uubC61A) Uppsala University Library (ALVIN), C 61, spreads, (pp.) 4–43, Hand 1 (Klemming 1883–84).
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-55762.

(41, uubC61B) Uppsala University Library (ALVIN), C 61, spreads, (pp.) 540–579, Hand 3 (Klemming 1883–84).

(42, uubC528) Uppsala University Library (ALVIN), C528, spreads, (pp.) 3 verso–23 recto, Hand 1 (Andersson-Schmitt, Hallberg, and Hedlund 1992).
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-55747.

(43, uubDG11) Uppsala University Library (ALVIN), DG 11, pp. 1–19, one hand (Pálsson 2012).
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-54179.

(44, lubMH17) Lund University Library (ALVIN), Medeltidshandskrift 17, pp. 5 verso–15 recto, "Textualis in one hand." (web metadata).
http://urn.kb.se/resolve?urn=urn:nbn:se:alvin:portal:record-14704.

(45, kbB59) National Library of Sweden, B 59, pp. 5 recto–14 verso, Scribe A (Wiktorsson 2011).
https://data.kb.se/datasets/2015/01/fornsvenska/B_59_002611384/.

(46, NKS2237) The Royal Library, Copenhagen, NKS 2237 kvart, pp. 39 recto–48 verso, one main hand (Karlsson 1904).
http://www.kb.dk/manus/vmanus/2011/dec/ha/object106158/da/.

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