

GEAS Methodology for Statistical Script Comparison

- 1) A sign form is a new sign type (e.g. L instead of K), if it has always or sometimes another shape and always another sound value than other signs of the same corpus.
- 2) A sign form has a new ordnungszahl (e.g. K₂ instead of K₁), if it has the same sound value but a different or similar shape [in the sense of 3) below] from the other ordnungszahlen of a sign type.
- 3) The shape of two signs can be "different (and not similar)", "(different, but) similar" or "the same (= identical)".
 - 3.1) A sign shape is called "different (and not similar)", if two or more of the following conditions – so-called "differences" – are fulfilled: a) The sign has at least one supplementary, intentionally drawn stroke; b) the length of a single stroke intentionally differs more than 35% relative to the corresponding stroke of the sign compared to it; c) the angle between two strokes intentionally differs by more than 30 degrees; d) a stroke is intentionally rounded (or intentionally unrounded) in contrast to the corresponding stroke of the sign compared to it; e) when a sign is intentionally mirrored or turned by more than 30 degrees.
 - 3.1.1) Definition of "intentional"? An intention is given, if either a) a difference in the sense of 3.1) is repeated more than once in the same sub-corpus, or b) a difference in the sense of 3.1) is present in an inscription which i) shows a high level of calligraphic regularity, and ii) shows, as a whole, no stylistic feature (i.e. no serifs or similar style mutations) which could account for the formal difference in question.
 - 3.2) A sign shape is called "(different, but) similar", if exactly one of the parameters for "different" in 3.1 [a), b), c), d) or e)] is observed.
 - 3.3) A sign shape is called "the same (= identical)", if it is not different (3.1) and not similar (3.2).
- 4) A sound value can be "different (and not similar)", "(different, but) similar" or "the same (= identical)".
 - 4.1) A sound value is called "different (and not similar)", if neither place of articulation nor manner of articulation are the same.
 - 4.2) A sound value is called "(different, but) similar", if either place of articulation or manner of articulation are the same.
 - 4.3) A sound value is called "the same (= identical)", if both place of articulation and manner of articulation are the same.