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***Lost in Translation* – Typographic variation in loanword surrounded punctuation positions**

On the vanishing of the virgule in 18th century printings

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Abstract: In German printings of the early 18th century, the shift from the hitherto dominant sentence-dividing punctuation mark, the virgule, to the comma, takes place astonishingly rapidly. It is also astonishing that until recently, research has barely devoted itself to this phenomenon, even though it is at least a turning point in the history of the highest-frequency punctuation mark in German writing.

The paper examines to what extent the transition from the use of the virgule to the comma is carried out in a phase-specific manner. Previous samples have indicated the influence of the font choice on the choice of punctuation: Printers or typesetters in the early 18th century set the comma especially in the environment of the Antiqua script, which is used to graphically label non-native words or syntagms. Is this a kind of “gateway” to the comma?

By means of a corpus analysis in micro-diachronic sections, the status of the virgule/comma variation will be associated with the typographic variation in terms of the use of Latin Antiqua type and the German type.

Keywords: punctuation, typographic variation, loanwords, virgule, 18th century

1 The virgule today

If you search for the term “virgule” in the rule parts for punctuation in orthographic codes of contemporary German, you will search in vain. However, the virgule still exists in its historical form; it has just another name: “Schrägstrich” (slash). For example, the current Duden spelling devotes exactly one page to the “Schrägstrich” (slash) (out of a total of 1264 pages) (cf. Duden 2017: 100).

The existence of the slash as a component of the current spelling standard shows that the former virgule in the guise of the slash has definitely “survived”

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until today, at least in form. In its function, however, it is no longer used as a punctuation mark to shape the internal structure of sentences, as it was the case in the 18th century. It had been the most frequently used punctuation mark for centuries.

2 The genetic perspective on the change of form and function of the virgule in the 18th century

The surprisingly rapid change from the virgule to the comma in the 18th century was for a long time hardly acknowledged in research. This may also be due to the teleologically-oriented tradition of codex and standard language research, where the goal – the standard language – and not the path to it was the focus of attention. It is only in recent years that Rinas (2017), Kirchhoff (2017) and most recently Rössler and Froschmayer (2019), Ringlstetter (2019) and Lemke (2020) examined the rapid change from virgule to comma in the 18th century in more detail with corpus-based analyses (for details see Section 3).¹ In contrast to the teleological perspective, the genetic perspective (which is the perspective related to the genesis) tries to avoid the distorting “tunnel view” of the later “winners” in the standardization process.

3 Punctuation and typographic variation: Virgule, comma, fractur, antiqua

The dominance of the virgule as a sentence-internal punctuation mark up to the 18th century was for a long time directly linked to the fractur font commonly used in German-speaking countries. Virgule and fractur virtually went hand in hand. However, it should not be forgotten that we are talking about typographic developments here, which also means talking about typeface in print. The virgule as a punctuation mark originates from medieval handwriting culture. Its usage, though, differs slightly from that of the comma, which has only existed since the 16th century and was first used in Latin printings.

¹ Some passages of this article are based on Rössler (2016), Rössler and Froschmayer (2019) as well as Ringlstetter (2019), whose contribution is a summary of the admission thesis/bachelor thesis initiated and supervised by the author.

The choice of typeface should be seen in the context of the history of typography against the background of the specific role of denominations in early modern Germany. Thus Glück (1987: 116) sees the two typefaces as a “denominational means of differentiation and struggle”. From a purely typographical point of view, virgule was more appropriate than the comma as a punctuation mark: “For the narrowly set *fraktur*, which was often difficult to read due to the refractions, the elongated form of virgule visually interrupted the dense typeface.” (Killius 1999: 124; translation P. R.)

While the virgule was used in the German texts printed in *fraktur*, the round comma was used in the Latin texts written in Germany, quotations or foreign words usually set in *antiqua*. Typographically, this is also attributed to the *antiqua* typeface.

Kirchhoff proves this in his corpus analysis using the example of a text used by Ramelov from 1682: “Remarkable is [...] the occurrence of the comma, the *divis* and also the exclamation mark in its modern forms <, - !> in Latin quotations typographically highlighted by the *antiqua script* [...]” (Kirchhoff 2017: 154; translation P. R.)

Bredel, too, uses two editions of a short text excerpt from Christian Wolff’s “Vernünfftige Gedanken von den Kräften menschlichen Verstands und ihrem richtigen Gebräuche” [Reasonable thoughts on the forces of human reason and their proper use], both from the same printing house, to demonstrate the modernization process from the 2nd to the 9th edition, “which took place within only 20 years: The virgule has been abolished and replaced by the comma, while the formal relationship between virgule and the *fraktur* remains clear” (Bredel 2007: 80; translation P. R.). Bredel’s statement makes it clear that the change from virgule to comma means the change to the *fraktur*. Von Polenz indicates something similar: He describes the change from virgule to comma as the “shortening of virgule to comma (dwarf dash)” (Von Polenz 1994: 249; translation P. R.). Although the change from virgule to comma had already taken place, the typographical choice in which this change of sign takes place remains the same: *fraktur* typeface. The same applies to a factual text by Andreae from the year 1718, for which Kirchhoff also proves that – at least as far as the texts he examined are concerned – virgule and comma were first used in parallel: “Whereas in earlier texts the comma in its modern form <,> was only used in longer Latin quotations, we now find the comma also systematically in the continuous text after foreign words in Andreae’s work.” (Kirchhoff 2017: 159; translation P. R.)

With the “comma in its modern form” Kirchhoff refers to the *antiqua* comma. The fact that the *antiqua* font was deliberately chosen to emphasize Latin text passages or words for the reader is attested several times in literature. Therefore, Anne Zastrow states for typographical history since the 16th century: “There is a

tendency in printing in general and for the 19th century in particular, to emphasize a foreign word by using antiqua type rather than the usual continuous text, which is usually printed in *fraktur*.” (Zastrow 2015: 78; translation by P. R.)

The fact that the round antiqua comma was used in longer Latin quotations is not new either. What is new, however, is Kirchhoff’s observation that the round comma can now even appear after individual words. What is new, then, is that foreign words in general, whether Latin or not, were printed in antiqua, and that the punctuation marks occurring in proximity of such foreign word spellings and their font choice were thematized. Kirchhoff’s findings point in the same direction in which this paper will be asked: Is there a connection between the rapid disappearance of the virgule, associated with the rapid rise of the comma in the German-language *fraktur* texts, and the typographical marking of foreign words or words by antiqua writing?

According to Kirchhoff, the development of punctuation can be described as follows: At first, the round comma was used in (longer) Latin quotations, later also after individual foreign words (in antiqua) in the environment of native German vocabulary (in *fraktur*). Finally, entire *fraktur* texts showed commas. However, Kirchhoff does not give a clear answer to the question of whether the transition from the virgule to the comma was the antiqua or the *fraktur* comma. Was it an already existing character chosen from another typography or did the printer stick to the typographic set and only shortened the virgule to the *fraktur* point? According to Killius, the printers were responsible for the abrupt use of the round antiqua comma. She refers to the great influence of typesetters and printers on the linguistic and typographical design of German (cf. Killius 1999: 124). She also states that from the second half of the 16th century onwards, the round antiqua comma was sometimes used instead of the usual virgules in texts that were written entirely in *fraktur*: “The virgule was used as punctuation mark in the *fraktur* sentence. In Latin texts, the round comma was used, probably developed by the Venetian printers. In some German prints of the time, however, the Latin form of the comma had already been used.” (Killius 1999: 124; translation P. R.)

According to Killius, a change in the function of the virgule took place as well. The virgule was now increasingly used syntactically: “In the second quarter of the 16th century, in addition to the use of the virgule as a pause in speech, its syntactic application gradually began to emerge.” (Killius 1999: 124; translation P. R.) According to more recent findings, however, it can be assumed that the use of the virgule was already predominantly based on syntax in the 16th century (cf. Kirchhoff 2017: 205). Regardless of the question of functional attributions, Besch states with regard to the dating of the pure change from the virgule to the comma that in the passages of the Luther Bible he examined, the virgule was consistently replaced by the comma from 1736 onwards (cf. Besch 1981: 191).

It should be noted though that not all virgules were replaced by commas; at some punctuation position, that is a position that suggests the use of a punctuation mark and which was occupied by the virgule up to that time, there was from then on a semicolon or colon (cf. Günther 2000: 280).

The new significance of the semicolon and colon instead of the comma in some positions is also confirmed by Kirchhoff's study, in which he analyses copies of other text types (grammar, scientific text). Based on the texts he examined, Kirchhoff considers the years around 1720 as a turning point in the further development of punctuation: "The most important punctuation mark up to then, the virgule, disappears and is replaced by the comma in its modern form." (Kirchhoff 2017: 174) The question of whether he means the antiqua comma with the "comma in its modern form" remains unanswered with Kirchhoff.

Clearer here is Karsten Rinas, who, like Kirchhoff, dates the change from the virgule to the comma to the first decades of the 18th century in his analysis of German punctuation theories, and he speaks of typographic change (cf. Rinas 2017: 180). In recourse to the punctuation teaching discourse of the late 18th century, Rinas states clearly:

Dass das Komma im Deutschen aus der Virgel hervorgegangen war, wurde auch noch in der Typographie im ausgehenden 18. Jahrhundert insofern reflektiert, als dieses in deutschen Texten oft als kleiner schräg verlaufender gerader Strich realisiert wurde, nicht als gekrümmtes Komma wie im Lateinischen, sodass ‚lateinisches‘ [,] mit ‚deutschem‘ [,] kontrastierte. Bereits Heynatz (1773: 15) plädierte aber für einen konsequenten Gebrauch der ‚lateinischen‘ Form auch in deutschen Texten. (Rinas 2017: 180)

[The fact that the comma in German originated from the virgule was also reflected in typography at the end of the 18th century to the extent that in German texts, it was often realized as a small diagonal straight line, as opposed to the curved comma as in Latin, so that 'Latin' [,] contrasted with 'German' [,]. Heynatz (1773: 15) had already pleaded for a consequent use of the 'Latin' form also in German texts. (Translation P. R.)]

Heynatz's plea indicates that, although virgule no longer plays a role in the printing practice of the late 18th century, the question of the choice between fractur or antiqua comma did not seem to have been decided at that time.

Rössler and Froschmayer examine the transition from the virgule to the comma based on two German newspapers of the early 18th century. They also discuss the question of a possible connection with typographical influences. Their analysis shows that the Hamburg newspaper *Der Hollensteinische Correspondente* switched from virgule to the fractur comma between 1712 and 1721. Up to 1736 the virgule was still used sporadically, namely in the headlines and in the scholarly article of the newspaper. Nevertheless, one can speak of a rather consistent change. From 1741 on, not a single virgule is to be found there. The situation is different for the *Wienerische Diarium*. There, the fractur comma appeared for

the first time in 1743. The transitional period extends until about 1751/52, characterized by a colorful confusion of virgule and fractur comma. Only after that, the fractur comma was used uniformly (cf. Rössler and Froschmayer 2019: 116, 117).

Furthermore, the shift from virgule to antiqua comma only occurred where Latin quotations or foreign words were already distinguished by antiqua writing in the context. In the *Wienerische Diarium*, the virgule appeared at the end only in the appendix, which was added to the newspapers. This appendix often came from other cities in southern Germany. Obviously, the original typography of the newspaper from the other printing location was simply retained in the appended parts, or the appendix was completely produced in another printing house. Thus, during the changeover to the comma, the fractur comma was already established at some printing locations, while the virgule still persisted at other locations.

With regard to the choice of typeface, the results of Rössler and Froschmayer confirm the research findings already mentioned: Antiqua comma and antiqua type were also used to mark foreign language quotations in the 18th century newspapers studied, before and after the shift from virgule to comma. The shift from virgule to comma meant the reduction of a punctuation mark that had been highly frequent until then. However, there was still a differentiation between two scripts. And at certain punctuation points formerly occupied by the virgule, other punctuation marks such as the semicolon or colon now took its place (cf. Rössler and Froschmayer 2019: 117).

Ringlstetter also focuses on the transition from the virgule to the comma in the 18th century. In contrast to Rössler and Froschmayer, who concentrate on one text type, Ringlstetter compares the punctuation practice in three text types: Christian Wolff's "Mathematische Lehr-Art" in 10 editions from 1710 to 1797 as a mathematical-philosophical text, which is also examined in this paper; Johann Jacob Woyt's medical-pharmaceutical text "Gazophylacium medico-physicum" in 6 editions from 1709 to 1743, and the spiritual text type in 14 editions from 1708 to 1797 of the Gospel of Matthew according to Martin Luther. Ringlstetter states for the examined mathematical and medical texts a coexistence of virgule and comma already in 1709. Between 1722 and 1734, the virgule disappears. "The former functions of the virgule as a sentence-internal punctuation device are completely transferred – except after Latin lexemes – to the modern comma. A shift of function to other sentence-internal signs – i. e. semicolon and colon – is not recognizable at any point." (Ringlstetter 2019: 219; translation P. R.). In contrast, the juxtaposition of virgule and comma is completely absent. The change is not gradual, but abrupt in the single text. Only in the biblical texts does the comma compete with a broader punctuation inventory for the former functions of the virgule.

Table 1: Analyzed punctuation positions in Wolff’s “Kurzer Unterricht von der Mathematischen Lehr-Art”, § 1–10.

	virgule	antiqua comma	Fraktur comma	total
1710 (Halle a. d. S.)	32	1	0	33
1724 (Halle a. d. S.)	8	1	31	40
1728 (Frankfurt/Leipzig)	40	2	0	42
1732 (Frankfurt/Leipzig)	6	1	35	42
1737 (Frankfurt/Leipzig)	4	2	36	42
1738 (Frankfurt/Leipzig)	0	2	40	42
1763 (Wien)	0	2	44	46
1772 (Halle a. d. S.)	0	1	40	41
1775 (Halle a. d. S.)	0	2	45	47
1797 (Marburg)	0	1	40	41
Total	90	15	311	416

According to Lemke, the comma also establishes itself formally or typographically as an independently used character vis-à-vis the virgule in the first half of the 18th century. Lemke concludes that the change of the character form to the comma takes place via a “detour”, because the comma in German-language print initially has the function of a stylistic-typographical distinction of foreign-language text material in the sentence and is used here in typographical alternation with the virgule, before it finally asserts itself as a prototypical structuring character in contrast to the virgule (cf. Lemke 2020: 303).

From the differently thematically and corpus-oriented weighted publications of the last years, I develop here the approach that the change from virgule to fractur comma represents an adaptation of typography to syntactic punctuation usage. The change to the fractur comma possibly gave expression to the syntactic claim of this sign. The virgule, as a sign originally marking rhetorical units, has long since ceased to live up to this claim. In this sense, Bredel (2007) describes the virgule-comma change as an adaptation of the virgule to the group of small clitics, which resulted in a shortening of the form of the virgule to the fractur comma. That the long existing antiqua comma in antiqua writing environment, which also belongs to the small clitics, promoted the rapid change from the large virgule reaching the upper line to the small clitic of the fractur comma, which like the antiqua comma is located only at the base line, is quite plausible. Therefore, I would like to focus on Bredel’s approach in this paper, which will be introduced and discussed in more detail in Sections 5 and 6 against the backdrop of the results presented in Section 4.

I would like to pursue the question of the choice between fractur or antiqua comma by means of small text excerpts (see also Table 1). The claim here is by no

Figure 1: Virgule, fractur comma and antiqua comma in the writing space.

means holistic. Rather, the comma, this short line at the baseline, has to be seen in the light of 18th century typographic history in order to illustrate this easily overlooked phenomenon between the history of punctuation and the history of typography.

As Figure 1 shows, both the virgule and the comma touch the baseline. In contrast to the virgule, the comma reaches mostly into the lower space and remains at its upper end in the middle space. The virgule, however, due to its length upwards, touches the midline or reaches partially into the upper space. Fraktur and antiqua comma take the same position in space, but differ in their shape. While the fractur comma has the shape of a short, oblique straight line with a slightly conical taper towards the bottom, the antiqua comma has the shape of a tapering curve towards the bottom with a point-like thickening at the base line.

4 Punctuation in focus: Wolff's Initial reason editions in longitudinal analysis

As a small corpus of evidence, I take punctuation positions from a scientific text of an important Enlightenment philosopher that was intensively received in the 18th century: Christian Freiherr von Wolff's "Kurzer Unterricht von der Mathematischen Lehr-Art" (Short instruction about the way of teaching mathematics) from the four-volume work "Der Anfangs-Gründe aller Mathematischen Wissenschaften" (The initial reasons in mathematics). Wolff was a lawyer, mathematician and philosopher. He is considered to be one of the most influential authors of the early 18th century in Germany. His "Mathematische Lehr-Art" from 1710 was a contemporary bestseller that has been republished many times. I examined the editions of 1710 (Halle an der Saale: Renger), 1724 (Halle a. d. S: Renger), 1728 (Frankfurt/Leipzig: Renger), 1732 (Frankfurt/Leipzig: Renger), 1737

Figure 2: Wolff 1710, § 1 (Electronic facsimile: Deutsches Textarchiv).

http://www.deutschestextarchiv.de/wolff_anfangsgruende01_1710/25 (accessed 17 October 2020).

(Frankfurt/Leipzig: Renger), 1738 (Frankfurt/Leipzig: Renger), 1763 (Vienna: Trattner), 1772 (Halle a. d. S.: Renger), 1775 (Halle a. d. S.: Renger), and 1797 (Marburg: Academische Buchhandlung) for my small corpus analysis, in particular the first ten paragraphs of the chapter “Kurtzer Unterricht von der Mathematischen Lehr-Art” in each edition (416 punctuation positions in total). Table 1 presents the overall results from the analyzed punctuation positions in the respective editions.

The ten editions cover the entire 18th century. They follow each other at relatively regular intervals and are well suited for diachronic longitudinal analysis because of the recurring identical text passages.

A first look at Christian Wolff’s “Anfangs-Gründe” (Initial reasons (in mathematics), volume 1) of the 1710 edition of Halle a. d. S. in Figure 2 shows that the virgule is the prevailing punctuation mark that divides the clauses within the sentence.

The beginning of the chapter “Kurtzer Unterricht” [Short instruction] also shows the typographical variation, since in the environment of foreign word

spellings set with antiqua, the position that suggests the use of a punctuation mark is also filled with an antiqua comma: (*definitiones nominales*,). The German text set in Fraktur, which characterizes the typeface of the page (and the entire text), is marked in the sentence structure with the virgule taken from the Fraktur font at the corresponding punctuation positions. Fraktur and antiqua thus already coexist, but have different functions in this text at the beginning of the 18th century. Fraktur marks the native German vocabulary for both the alphabetical characters and the non-alphabetical punctuation marks, while antiqua marks non-native vocabulary. That this typographical differentiation is not entirely consistent is already apparent in the title, in which the non-native nominal complex “Mathematischen Methode” is set in Fraktur.

If there is no Fraktur comma in the text passage of § 1 in the Figure 2 yet, but only the antiqua comma, this is due to the surrounding area. If Fraktur is set to the left of the punctuation position, because the text is in German, virgules are set at that position that divide the sentence internally. Only in non-native word surroundings marked by antiqua does the antiqua comma occur, which was already common in Latin printings in the 16th and 17th century (cf. Rinas 2017: 180).

Figure 3 shows that in the editions of Wolff’s “Anfangs-Gründe” [Initial reasons] in the German text passages, which are thus set in Fraktur, the (Fraktur) virgule is replaced by the Fraktur comma from the 1737 edition onwards. This process of detachment is discontinuous. While in the text passage of § 6 in the Halle edition of 1724 the Fraktur comma is predominant, the typesetters of the four years younger Frankfurt edition of 1728 again preferred the virgule.

The typesetters and printers of the Renger’s printing houses in Halle as well as in Frankfurt and Leipzig used the same typeface between 1710 and 1737 when it came to segmentation of the German text. Within the Fraktur typeface, they change from virgule to the Fraktur comma from the printing of 1737 onwards. The transition period until the edition of 1737 is characterized by partial text-internal variation between virgule and Fraktur comma.

As can be seen in Figure 4, typesetters and printers only change the font within a text in order to identify foreign words. In this environment, the round antiqua comma is then also placed at the same punctuation positions and not the Fraktur comma.

This typographical strategy of the typesetters/printers is particularly evident in Figure 4 and 5, in which two recurring text passages with punctuation positions in foreign word environments are shown in a longitudinal section from 1710 to 1797 in ten editions: *der Mathematicorum, das ist, die* (Wolff, § 1) (Figure 4) and (*definitiones nominales*), *oder* (Wolff, § 2) (Figure 5).

The selected text passages reveal the following: The typesetters/printers consistently used the antiqua comma (*Mathematicorum*,) on punctuation positions

Figure 3: Sentence-internal punctuation marks in Wolff 1710–1738: § 6. (Circles mark virgules, squares mark fractur commas. The gray shades of the circles and squares correspond to the lines).

after a non-native word throughout the entire investigation period from 1710 to 1797. Just as typographically consistent, they act according to native vocabulary: in all passages of the ten editions investigated, they chose the fractur comma (,). Until 1732, however, they still vary between virgule and fractur comma. From 1737 onwards, only the fractur comma is used. The choice of font is thus linked to the linguistic assessment of the typesetters and printers, of what they consider to be native or non-native vocabulary. Typographic and linguistic decisions correlate here.

Another factor is proximity in the construction: During the entire period of investigation, the typesetters are uncertain and vary accordingly between antiqua comma and fractur comma, if the punctuation mark does not immediately follow a foreign word. Only in cases of clitics next to the foreign word, the typesetters and printers consistently used antiqua. As soon as the clitic status is no longer directly attached to the foreign word (in antiqua), typographical uncertainty and variation occurs. This can be seen in the passage in § 2 in Figure 5. There is a closing bracket between the foreign word in antiqua and the punctuation position (*nominales*),). In this position the typesetters/printers vary between antiqua comma (1710, 1728,

Figure 4: Punctuation in the surroundings of foreign words in Wolff 1710–1797: § 1.

1732, 1737, 1738, 1763, 1775) and fractur comma (1724, 1772, 1797) throughout the investigated period.

This empirical finding provides a possible explanation for the rapid change from virgule to comma in the early 18th century. In the 16th and 17th century, it was already common practice in German texts to place the antiqua comma in positions that directly clitic to non-native words printed in antiqua. This practice continues in the 18th century. This familiar practice of typesetters and printers is transferred to the punctuation positions in typographically unmarked environments in the 18th century. The typesetters fill the punctuation positions in text environments with native German vocabulary with clitics with baseline contact only: They set the fractur comma, which replaces the virgule, which dominated until then. The antiqua comma serves as a gateway for the rapid change from the virgule to the fractur comma positioned in the writing space in the same way as the antiqua comma. Since the typesetters have long been familiar with the typeface of the an-

Figure 5: Punctuation in the surroundings of foreign words in Wolff 1710–1797: § 2.

tiqua comma as a clitic with baseline contact only, the use of the fractur comma instead of the virgule is no longer an obstacle.

But what is it that motivates typesetters/printers to make the change from the virgule to the comma? Why don't they simply continue the practice of setting the virgule for the internal sentence structure in the German prints of the entire 18th century?

5 System stabilization as a reason for the change of form from virgule to comma

Ursula Bredel provides a plausible answer to the question raised with the help of her system of punctuation developed for contemporary German (cf. Bredel 2008:

Figure 6: The relation of form and function in the German punctuation system and the role of virgule and comma (following Bredel 2011: 17).

220, Bredel 2011: 17). Bredel assumes that there is a systematic connection between the form of punctuation signs and their function. The concept of form is closely linked to the position of the punctuation marks in the writing space between the upper, middle and lower spaces, as previously shown in Figure 1. Bredel distinguishes between three form characteristics which can be used to distinguish the punctuation marks in German: [EMPTiness], [VERTicality] and [REDUPLICATION] (see Figure 6).

Punctuation marks without baseline contact have the form feature [+EMPT]: dash <—> and hyphen <->. Punctuation marks with baseline contact are [-EMPT]. These include colons <:>, dot <.>, (present antiqua) comma <,>, semicolon <;> and (former fraktur) comma <,>.

A further shape feature is the [VERTicality]. Punctuation marks that go beyond the midline into the upper space are [+VERT]. These are brackets <(>), quotation marks <„“>, question marks <?>, exclamation marks <!> and, in Bredel's opinion, also the ellipsis points <...>, which, historically, were three superscript short lines reaching into the upper space (cf. Kirchhoff 2017: 16, footnote 1). The virgule, which does not appear in Bredel's model, would belong to this group. It is therefore drawn in Figure 6.

Punctuation marks which do not exceed the midline bear the characteristic [-VERT]: These are the dash <—>, hyphen <->, colon <:>, dot <.>, (modern antiqua) comma <,>, semicolon <;> and (former fraktur) comma <,>.

The form characteristic of [REDUPLICATION] forms another group: Punctuation marks whose basic element occurs at least twice are [+REDUP]. These include the paired dash, colon, paired bracket, paired quotation mark, and ellipsis. The [–REDUP] punctuation marks include the hyphen, period, comma (both in anti-qua and fractur), semicolon, question mark, exclamation mark, as these punctuation marks consist of a single dot and a differently shaped line, and the virgule and apostrophe.

According to Bredel, the relationship between form and function is as follows: The more features a punctuation mark shares with another punctuation mark, the closer is the functional relationship between the two punctuation marks.

For the comma, this means the following: The comma has the same shape characteristics as the period and semicolon with [–EMPT, –REDUP, –VERT] (see Figure 6). All punctuation marks with the [–EMPT] shape feature are clitics. This means that they require a support character (e. g. a letter) to which they clitic. Functionally, the group belongs to the asymmetrical characters, i. e. the writing space to the left and right of the character is differently shaped. Here, clitics are in opposition to the fillers. All fillers have the characteristic [+EMPT]. Fillers are, for example, letters, special characters and numbers. Their common function is their symmetry, i. e. characters of the same type (letters, numbers, spaces) can be on the left and right of them.

According to Bredel's model, the virgule with its shape features [–EMPT, –REDUP, +VERT] is a punctuation mark with a communicative function, just like the question mark and the exclamation mark. Historically, this function was actually attributed to the virgule. In the course of the 16th and 17th centuries, however, there was a change in function: the virgule gradually transferred the communicative function to the emerging question mark and exclamation mark (cf. Bredel 2007: 80; Kirchhoff 2017: 180). The virgule thus increasingly lost the original communicative function. Instead, it developed into a syntactic punctuation mark like the period and the semicolon (cf. Lemke 2020: 303).

The transition from the virgule to the comma in the first half of the 18th century can be explained with the help of Bredel's form-function model by the fact that the virgule was literally no longer in form at the beginning of the 18th century due to its change of function in the course of the 16th and 17th centuries. The form feature [+VERT], which she assigned to punctuation marks with a communicative function such as exclamation marks and question marks, was less and less suited to its function as a marker of internal syntactic structures at the beginning of the 18th century. In order to get back to the appropriate functional class, the virgule had to change its form: It was shortened to a character that no longer reached across the midline [–VERT]. It thus joined the full stop and semicolon, the punc-

tuation marks with syntactic function. The change in form served to stabilize the system.

6 Limitations

As convincing as Bredel's form-function model may seem as a systematic of current German punctuation, it has its limitations related to diachronic conditions. Consistently applied, it would mean that the virgule with its form feature [–EMPT], which means the baseline contact, is to be assigned to the functional group of the clitics. Thus, as an asymmetrical sign in the writing space, the virgule would always lean against a letter on the left and would have to open up a blank space on the right.

It is precisely this asymmetry in the horizontal writing space that is often not present in the printings. Sometimes, the virgule is surrounded on the left and right by larger or smaller spaces, sometimes it leans on the left against a word and on the right a blank space follows (as with the comma), sometimes the strategy of the typesetters in the layout, which means in the “determination of the small white spaces before and after each character” (Willberg and Forssman 2010: 233), is not exactly recognizable. The typographical balancing between the width of the font, thicknesses (including the space before and after the letter) (Hiller and Füssel 2006: 90), and the spacing for the optimal, reader-friendly design of the individual line in the ensemble of the type area is not considered in Bredel's approach. However, it plays a role in the historical prints in the production process of the texts (cf. Voeste 2008; 2018). A systematic assignment of the virgule to the clitics or to the fillers is in any case not possible according to the current state of research. The assumption that in the 16th and 17th centuries, the virgule tended to be more frequently placed between spaces and thus tended to have filler status has yet to be empirically proven. If this were the case, then a functional opposition to the exclusively small asymmetrical clitic comma from the 18th century onwards could indeed be established. This could serve as a further argument for the stabilization of the punctuation system from the 18th century onwards.

7 Conclusions

Typographical factors (namely: use of the antiqua comma) and functional factors (namely: assignment of function to other punctuation marks) prepared the ground as early as the 16th and 17th centuries for the fact that in the first half of

the 18th century, the change of form from the virgule to the comma in German-language printings could take place within a very short time.

This change of form contributed to a stabilization of the punctuation system in form (namely: comma) and function (namely: syntactic sign). Typesetters and printers used the typographic inventory to mark linguistic features in the 18th century, as they had done the centuries before. The antiqua typeface continued to be used to mark words perceived as non-native and was also still used for the comma in this environment.

I wanted to show that the fractured comma at punctuation positions of internal sentence structure in the environment of native German vocabulary replaced the virgule in the first half of the 18th century. The choice of either fractur or antiqua comma was rather not a political decision, as it was the case in the antiqua-fractur debate. This special punctuation mark is too small and not visible enough in the printings. The typographical set seems to have been used by typesetters and printers to set the comma in antiqua where they had already set antiqua letters, as in non-native vocabulary, whereas in the native fractur environment a fractur comma should also be set in antiqua. The choice of font stayed constant with clitics.

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