Re Introducing graphetics

The study of the materiality of writing, its questions, and its problems

Dimitrios Meletis
University of Graz

SPRACH WISSEN SCHAFT GRAZ

UNI GRAZ

DEFINITION Graphetics studies the materiality of writing and investigates all phenomena and questions pertaining to it. As such, it is not only a subdiscipline of **grapholinguistics** and the material auxiliary discipline to graphematics, but it also approaches questions that pertain not primarily to linguistics but to a number of other neighboring disciplines such as philosophy, didactics, neuropsychology, art history, and many more. Thus, graphetics can be broadly defined as an interdisciplinary area of research in which questions about the materiality of writing are concentrated and negotiated (cf. `Meletis 2015`).

SUBDISCIPLINES

I. Productional graphetics
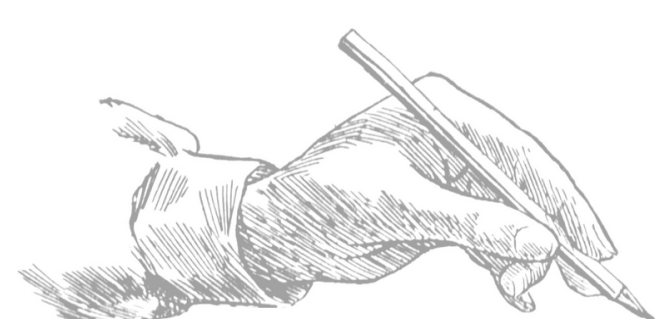
Productional graphetics asks questions that pertain to the material aspects of the writing process. On the one hand, it focuses on the cognitively lower and unconscious levels of writing: which fundamental processes are involved in producing sequences of basic shapes in handwriting? To consider modern technologies as well: which processes are involved when typing on a keyboard or wiping on a touchscreen? These questions are primarily of physiological and psycholinguistic nature. An example for productional graphetic research is the study of character amnesia in Chinese (cf. `Xu 2015`), where a person forgets how to produce specific characters that they could formerly write. Interestingly, in many cases, they are still able to read these characters, implying that reading and writing processes are to some degree independent of one another. On the other hand, choices that are located at a higher conscious level of production but are still concerned with visual aspects are also of interest for productional graphetics: from a sociolinguistic perspective, for example, questions about the motivations of the writer to choose a specific font or a specific form of highlighting (**bold** instead of *italics* or underlining etc.) can be asked. Choices on all levels of writing, including the material, are – to some degree – "acts of identity" (cf. `Hatcher 2008`), whether conscious or unconscious. What was the writer's intention to design a text in a specific way, and was it motivated socio-culturally – if so, how? Does the producer of a text want its graphetics to convey belonging to or distance from a certain social group?

III. Perceptual graphetics

Finally, the third subbranch, and probably the most prominent of the three, is **perceptual graphetics**. Like productional graphetics, is not predominantly a linguistic field, but rather one that is enriched by research from psychology, cognitive science, and neurobiology. It is mainly concerned with the processes of perception, recognition and – on the highest level – reading. How is a basic shape or a word that is itself made up of a sequence of basic shapes recognized and read? On a higher – but not necessarily conscious – level, sociolinguistic questions can be asked, symmetrical to the questions of productional graphetics: what emotions are evoked by the use of different fonts? What connotations do fonts have? What is the attitude towards a specific style of writing (a specific font, handwriting)? A striking example of the importance and the reality of a sociolinguistic perceptual graphetics is the passionate hatred against the font *Comic Sans* in the realm of the internet (cf. `Meletis subm.`). This is largely a sociolinguistic issue, but since it has at its core the materiality of writing, it is also a matter of graphetics.

II. Descriptive graphetics

မြန်မာအက္ခရာ Burmese script *ca-lonh*

The second subbranch of graphetics is likely the most 'traditionally' linguistic one in that it is solely descriptive. **Script-graphetics** or **descriptive graphetics** (from German *Skriptgraphetik* or alternatively *Skript-Graphetik,* cf. `Meletis 2015, Fuhrhop & Peters 2013`) analyzes products of writing divorced from the processes of production and perception. This, however, does not mean that a descriptive analysis cannot occasionally spawn questions pertaining to other graphetic subdisciplines as well, for example on how the production (and the involved surfaces and instruments) could have affected the visual shape of a product of writing. This question of why a product of writing looks the way it does is indeed of importance. An example comes in the form of the visual character of a whole script: the Burmese script, which is also called *ca-lonh* 'round script' (cf. `Coulmas 1996: 55; Watkins 2009: 170`), is so visually round in nature because it was traditionally written on palm leaves; these have linear fibers, which is why angular basic shapes would have caused the leaves to rip. In regarding these issues, script-graphetics is similar to neighboring (predominantly historic) disciplines such as palaeography and epigraphy. They are, in this understanding, specialized subdisciplines of descriptive graphetics. The different levels of graphetics that are presented below are based on a description of the spatial arrangement of writing (a *cartography* of the writing surface) and, thus, are themselves a product of a script-graphetic analysis.

Cartography of the writing surface

concept by `Bredel (2008)`, `Reißig (2015)` and `Meletis (2015)`, terminology adapted from `Stöckl (2004)`

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SPACE **SEGMENTAL SPACE**	**LINEAR SPACE** SPACE
UNITS **ELEMENTARY FORM, GRAPH, BASIC SHAPE**	**ONE-DIMENSIONAL GRAPHETIC SEQUENCE, LINE** UNITS

A **BASIC SHAPE** fills exactly one segmental space. The basic shape is a purely material unit, linguistic reference is not of interest at this point. It is an abstract visual unit that includes information on the nature and number of segments (**ELEMENTARY FORMS**) and their spatial arrangement. The segmental space might be subdivided in subsegmental subspaces. Abstract basic shapes are materialized by (etic) **GRAPHS**.

micrographetics

When segmental spaces are concatenated, they form the so-called **linear space.** When only part of the linear space is filled (and encompassed by empty spaces), this unit is termed the **ONE-DIMENSIONAL GRAPHETIC SEQUENCE**; it is functionalized differently in different writing systems (words in alphabets, syntactic units in Thai). When all of the linear space is filled and the physical limit of the surface is reached, we speak of the **LINE**.

mesographetics

high space central space low space *Adyo*
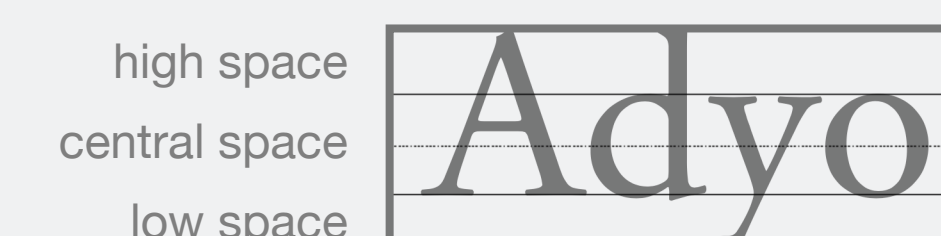
macrographetics

When linear spaces are concatenated, they form an **areal space.** The units that fill these spaces are termed **TWO-DIMENSIONAL GRAPHETIC SEQUENCES** – the paragraph or the column serve as examples. These are typically combined with semiotically different material (figures, tables, photos) to form a layout. The entirety of a surface on which areal spaces are combined is the **holistic space**, the prototypical unit for which is the **PAGE** (in a medium-indifferent sense). This poster is a page that fills the entire holistic space of an A0-sized piece of paper.

SPACES **AREAL SPACE, HOLISTIC SPACE**
UNITS **TWO-DIMENSIONAL GRAPHETIC SEQUENCE, PAGE**

paragraphetics

The third dimension and with it the physical properties of the writing/reading surface greatly influence processes of reading and writing and/or can be socio-semiotically charged. Possible properties studied here include the initial choice of paper or other materials as well as their color/brightness, transparency/opacity, surface (matt vs. glossy), grey-scale value, and haptic phenomena such as thickness, density, grammage/weight (cf. `Spitzmüller 2016: 101f.; Willberg & Forssmann 2010: 71; König 2004: 97f.`), but also external factors such as incidence of light when writing or reading.

3RD DIMENSION

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Dimitrios Meletis, MA
Institut für Sprachwissenschaft,
Karl-Franzens-Universität Graz
Merangasse 70, 8010 Graz
dimitrios.meletis@uni-graz.at
http://kfunigraz.academia.edu/DMeletis