

Introduction

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The phrase ‘materiality of reading’ may be interpreted in different ways, since there are numerous disciplinary perspectives on what constitutes materiality. This collection of essays is a result of discussions between members of the European research initiative E-READ (“Evolution of Reading in the Age of Digitisation” (2014–2019), funded by European Cooperation in Science & Technology (COST)), which brought together nearly 200 scholars and scientists studying numerous aspects of reading. Our anthology addresses the materiality of reading from novel perspectives influenced to some extent by the editors’ academic backgrounds in neurobiology and embodied reading, and typography and design for reading. We asked for ideas and work in progress (rather than final research studies) about materiality, so that we could capture some of the debate that occurred in the E-READ meetings – in Zadar, Vilnius, Reading and Stavanger.

The materiality of reading is about the interaction between a person and an object where the person uses different senses to know and understand the object and the object is a more or less considered manifestation of a content. This materiality can also involve the comfort experienced while reading, the space (where we read) and the act of reading (how we read). Materiality also plays a pivotal role in who is included or excluded as a reader. It influences our access to texts, as well as the ease of reading and kinds of user engagement that are possible. For typographers and book designers, the materiality



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of reading is about making text and pictures accessible, legible, intriguing and enjoyable, recognising that different kinds of readers and circumstances of use should impact on the visual organisation of text and image (see, for example, Hochuli & Kinross 1996).

Psychologists use the term ‘embodied reading’, drawing on cognitive sciences and research. Accordingly:

We do not only read with our eyes (not even in the most rigorous experimental setting). Neither do we write, text or tweet exclusively with our fingers and hands. All acts of human communication, creative expression, meaning construction, and learning convey the fact that, as human beings of a biological nature, our actions and interactions are inevitably and intrinsically multisensory.

(Mangen & Schilhab 2012, 286)

However, embodied reading is not concerned merely with multisensory processes contained within the reader. The perspective takes inspiration from a recent shift in the cognitive sciences that goes under the name ‘embodied cognition’, an umbrella term used for the so-called ‘four Es’; the mind embodied, embedded, enacted and extended (for example Menary 2010). Hence, embodied cognition breaks with the ‘traditionalist’ view that attributing meaning to words spoken and written occurs irrespective of the physical substrate, that is the body of the cognizer.

Inherent to the embodiment paradigm is instead the notion that humans are engaged in continuous interaction with and are therefore strongly embedded in their environments and the material present in them (Wilson 2002). As part of being alive, we instantaneously adjust and adapt to circumstances, environments and people (Schilhab et al. 2018). As such, our cognitive modus operandi is essentially malleable and volatile, which limits instances of amodal, abstract and arbitrary knowledge processing to select occasions (Schilhab 2017). Thus,



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the embodied reading view is sensitive to the complexity that constitutes reading situations, including their cultural meanings as these are played out in different historical settings and their replacement of traditional subject–object relations for many-faceted multi-level interactions, as well as their material composition.

Typographers are aware that the difference in materiality between printed and digital texts affects the reading experience. Paul Luna (2018) notes that e-books present a window of decontextualized text to the reader, denying them the insight that handling a physical book gives about the scope and overall structure of the work. Physical texts encourage kinds of reading that include turning back, looking forward, annotating and skipping, and regarding these activities e-book readers and software still fall short of the printed book. Materiality is also expressed by the physical, dimensional presence of letters, words and text on a page, and consideration of the processes by which they were put there. As noted by Eric Kindel,¹ this, in turn, brings about reading that blends material-sensory and cognitive aesthetics, and gives rise to reflections on the work of capturing thought and experience as language and (material) form.

We have organised the essays into three sections that represent the ways in which materiality was perceived in the COST workshops: where and how we read; the object of reading; and engaging with the text.

Theresa Schilhab and Anežka Kuzmičová explore how digital reading has transformed how and where people read, and relate this to grounded cognition. The late Paul Stiff's short paper (published in *Eye* magazine in 1993) questions the post-modern notion of the passivity of reading and the unconventional use of typography to make readers work to engage with

¹ Informal correspondence with the editors in 2019.



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a text, and that typography can affect how people read by addressing the needs of different kinds of reader and genres of text. Ana Vogrinčič Čepič, Patrícia Dias, Anežka Kuzmičová and Skans Kersti Nillson discuss how the reading device, type of text and purpose of reading relate to different bodily postures and physical environments, and the material advantages of the single-purpose nature of print books. Adrian Netedu reports on an empirical study about the role and place of reading in student daily activities in the context of student perspectives on the switch from printed books to digital resources.

Pasqualina Sorrentino, Massimo Salgaro, Teresa Sylvester, Jana Lüdtke, Arthur Jacobs and Gerhard Lauer address the dichotomy of digital native/digital immigrant, investigating the reading preferences and reading habits of younger and older people in relation to literary reading on paper vs. on screen.

Immersive reading presents an opportunity for reader–text interaction, shifting ideas about what is meant by the object of reading. *Alice in Wonderland* is used in Federico Pianzola and Wayne de Fremery’s exploration of how a virtual reality reading (VR) environment might be designed to immerse the reader in the experience of the story, including sound and interpretations of landscape. In their visual essay, Chloé Aubry and Claire Gauzente propose a framework for studying the different material processes used in artists’ books and their potential impact on the readers/users of such books.

The section on ‘engaging with the text’ is concerned with the ways different kinds of readers access content in printed and digital texts. Valeria Levratto discusses how accessing information in a text (conventionally done through indexes and contents pages in the case of a book, for example, which are produced by editors) has changed with digital formats, where readers are able to control routes through a text, and their individual interpretations of its content through tagging. A different perspective is given by Ann Marcus-Quinn and Triona



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Hourigan, who explain how they encourage informal ‘book making’ to stimulate reluctant readers.

Based on their study with eye-trackers, Arūnas Gudiničius and Andrius Šuminas discuss selecting strategies and browsing patterns among readers searching for books and query their accepted relation to age and gender. The anthology closes with an exemplary essay by Alenka Kepic Mohar, who reflects upon the shift in materiality of textbooks for education by examining several examples of primarily Slovenian textbooks from various periods, ending with digital versions.

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