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Book review

Straßburger, Lena (2022). *Humour and Horror: Different Emotions, Similar Linguistic Processing Strategies*. Berlin: De Gruyter Mouton.

At the first sight, humour and horror may seem as completely opposing phenomena, as they provoke contradictory emotions in the recipients: humour tends to amuse the audiences and evoke exhilaration, whereas horror is associated with negative emotions, such as fear and disgust. However, Lena Straßburger's book *Humour and Horror: Different Emotions, Similar Processing Strategies* promises already in its title to address the similarities between the two phenomena rather than their differences and succeeds in identifying the shared features of humour and horror and in using them as the basis for experimental research from the perspective of psycholinguistics.

In order to be able to compare humour and horror instances and their cognitive processing, Straßburger limits the notion of horror she works with to *art-humour*, drawing on Carroll's (1990, p. 12) distinction between *natural horror* (real sources of fright) and *art-horror* (cross-art genre). She identifies incongruity as the *tertium comparationis* between art-horror and humour and successfully transfers theoretical as well as experimental findings concerning incongruity processing from the field of humour research onto art-horror. The book thus presents an innovative approach through bridging the fields of humour research and horror research and closes a research gap "by being the first to experimentally compare humour and art-horror and address the real-time processing of art-horror" (p. 113).

The author's argument is convincingly presented throughout the "Introduction" and the subsequent 4 Chapters, which span a rich, solid literature review related to humour and horror research as well as the meticulously presented practical experiments carried out by the author. Frequent summaries of the theoretical and experimental findings presented in the individual Chapters (as "Intermediate results" and then repeated in the first section of the 5th, concluding Chapter) consistently wrap up the most significant knowledge, stress its relevance for the set research goals of the book, smoothly guide the reader and highlight the merit of the book consisting mainly in the aforementioned extrapolation of incongruity as the common denominator between humour and art-horror.

The introductory Chapter presents the book's aims and draws attention to the shared feature of incongruity between art-horror and humour. It gives an overview of the book's contents and sets the following research questions, which are then systematically addressed in the following Chapters:

> 1. Does art-horror evoke the same kind of incongruity as humour?
> 2. Does art-horror elicit additional processing costs compared to (in)coherent items?
> 3. How do the cognitive processing costs of art-horror differ from those of humorous, incongruent items, with respect to intensity and time-course of the observed costs?
> 4. Are these processing costs associated with the local incongruity of the stimulus? Can they be correlated with incongruity detection and resolution?
> 5. Do the recipients react emotionally after incongruity detection and resolution? (pp. 1-2).

Chapters 1, 2 and 3 then offer a systematic overview of the art-horror (Chapter 1) and humour (Chapter 2) theories and approaches to experimental measurement of incongruity processing (Chapter 3). These theoretical Chapters are beneficial not only due to the careful listing of existing theories and providing a well-arranged literature survey, but also thanks to the author's ability to critically assess the similarities and differences between the approaches. The author succinctly and clearly presents to the reader what innovations each of the theories brought and what were just different conceptualizations of the same phenomena, often using different terms for describing the same features of horror or humour.

Specifically, Chapter 1 discusses the horror protagonists, topoi, objects and narrative strategies and consults psychoanalytic and cognitive theories in order to explain the horror genre's ability to evoke emotions in recipients. The author highlights the cognitive interpretation of art-horror as "the union of incongruous, cognitive concepts like life/death, normality/abnormality, reality/unreality, or safety/danger" (p. 36). She also correctly reminds that although art-horror typically provokes feelings of fear and disgust, it can also be linked to pleasure, as recipients find enjoyment in consuming horror material despite its presentation of fearsome or disgusting situations (cf. Smuts's 2014 paradox of painful art and Carroll's 1990 paradox of horror).

Chapter 2 covers humour theories from Plato to modern approaches and facilitates the reader's orientation in them by using Attardo's (1994) classification into social, psychoanalytical and cognitive approaches. As in Chapter 1, emphasis is put on cognitive theories. Among others, Raskin's (1985) Semantic Script Theory of Humour and Attardo's (2017) General Theory of Verbal Humour are introduced, together with their developments e.g. by Canestrari (2010) and Tsakona (2013). The presence of incongruity in humour is again stressed and, based on that, it is suggested that art-horror and humour are comparable and "unified terminology" (p. 82) can be used for their analysis. Through the transfer of incongruity perception processes from humour to art-horror, Straßburger claims that "art-horror is also processed in a three-step procedure of incongruity detection, resolution, and emotional response" (p. 82), which she tests later in the book.

The possibilities of comparison between art-horror and humour are then developed further in Chapter 3. It presents previous experimental studies and discusses the options of experimental testing of incongruity processing from the psycholinguistic perspective, above all measurements of additional costs in cognitive processing via reading time, ERP (event-related brain potentials) and fMRI (functional magnetic resonance imaging) experiments. Moreover, it is stressed that this processing can be influenced by the recipient's individual differences.

After the first 3 Chapters, which prepare the ground for the experimental testing of incongruity processing in humour and art-horror, Chapter 4 finally presents the study that measures the additional cognitive costs and emotional reactions. Previously, such experiments were performed only for processing incongruities leading to exhilaration; other emotions were not covered. Chapter 4 is divided into 4 Sections which are further subdivided and clearly and in a detailed way describe the methodological processes involved in the study and the individual measurements involved in the experiment.

The first part of Chapter 4 presents a norming study that was conducted online before the main experiment in order to preselect potential test items based on the judgement of participants regarding the perceived humorous, art-horror and surprising nature of the items. The items had the form of minimal triplets that had the same script opposition and logical mechanism based on the General Theory of Verbal Humour (Attardo & Raskin, 1991; Attardo, 2017) and differed only in the punchlines. The author usefully presents examples of the test items, where one can see that they had the form of three identical sentences where just the punchline differed and exemplified humour in one case, art-horror in the second case and a control coherent text with

no incongruity in the third case. These items were complemented by fillers and divided into four lists so that each participant saw only a list of art-horror and coherent items and fillers or only a list of humour and coherent items and fillers. Each list was complemented with questions about the items' frightening/humorous potential, surprising potential, and the recipients' comprehension. Results of this norming study helped to identify, for example, that humour items needed to be improved because their funniness values did not reach the expected significance threshold. A second norming study was then performed to measure again the humorous/art-horror/surprising nature of the items and the participants' comprehension and, based on that, 36 best working triplets were selected for the following experiments.

There were three main experiments performed: measuring reading times (Section 4.2), measuring facial expressions (Section 4.3), and measuring neuroelectric activity (Section 4.4). Measuring reading times is based on the assumption that longer reading times point to more cognitive costs elicited (cf. Just & Carpenter, 1980). Participants were shown segments of the testing items on the screen and controlled how long they wanted to fixate on a segment by pressing a button, which activated the next sentence segment. During this self-paced reading, the participants' faces were recorded to see which facial movements and emotional correlates were activated, using facial action coding system (cf. Ekman et al., 2002). This was the second experiment, which ran parallelly with the first one. To account for the connection between facial movements and individual traits, questionnaires were used eliciting the participants' disgust sensitivity, cheerfulness, seriousness, bad mood, and gelotophobia scores. Finally, the third, neuro-electric activity experiment used the method of electroencephalography and consisted in participants being given elastic caps with scalp electrodes while reading the testing items. The testing items were supplemented with items that presented incoherence (unlike the previous two experiments where only humour, art-horror and coherent items were shown). During reading the items, the participants' brain activity was recorded in the form of electroencephalograms.

The reading times experiment aimed to find out whether incongruity in art-horror elicits additional processing costs compared to processing coherent items without incongruity and how the cognitive processing costs of art-horror differ from those of humour. The results confirmed the author's hypothesis that "both art-horror and humour elicited longer reading times than the coherent condition at the critical segment" (p. 138). At the same time, art-horror reading times did not differ significantly from humour reading times, which the author interprets as supporting the hypothesis about similar processing mechanisms of humour and art-horror, but at the same time she admits that this might be due to imperfections of the reading paradigm.

The experiment using the facial action coding system elicited only few facial expressions. Despite that, some trends confirming expectations could be traced, such as exhilaration facial movements appearing mostly in humour items. With respect to the poor quantitative findings, Straßburger is sceptical about the usefulness of the facial action coding system in experimental linguistics, mainly because such studies are usually performed in unnatural laboratory conditions which might be the cause of the low number of visibly expressed emotions in participants, who cannot fully immerse into the material as in the case of natural social situations.

The neuro-electric activity experiment confirmed the expectation that art-horror elicits enhanced neuro-electric activity, which is related to the detection of the semantic violation, similarly to humour. Importantly, it was also found out that the processing of humour and art-horror began to differ at the late stage (i.e. the emotional phase).

Based on these findings, the final Chapter 5, apart from summarizing the results, develops a model of incongruity processing for both humour and art-horror (p. 188), based on Rothbart's model (2017 [1976]), describing different reactions to incongruity depending on arousal level and contextual dangerousness. Straßburger applies the adjusted model both to art-horror and

humour based on the findings that "incongruity and its resolution are important in both phenomena, but not the distinctive criterion of either" (p. 186) and that art-horror and humour differ only in the elicited emotions, which make the difference in processing.

Straßburger's book succeeds in addressing the set research question. At the same time, the author is aware of the limitations of the performed experiments, which consist, for example, in the limited form and nature of the testing triplets: items that would be successful as art-horror but would not work as humorous and vice-versa could not be included. Further limitations may include the absence of other than verbal modes in the testing items and unnatural laboratory conditions, which might have prevented the participants from full enjoyment and stronger reactions. The book suggests areas for further research, which could remedy the shortcomings of the present study, explore other related phenomena, such as the differentiation of disgust and fear, and mainly further investigate the presented model. The book is very innovative and thought-provoking and can serve as an excellent basis for further investigation of art-horror using the proposed model and extrapolations of approaches traditionally applied to humour. The postulates of the present book can be tested on other horror material in order to review and refine the findings of this first psycholinguistic comparison of horror processing to humour processing.

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