Toward an Aesthetics of Adaptation in Empirical Research

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Abstract: In their article "Toward an Aesthetics of Adaptation in Empirical Research" Marion Behrens, Christian Kell, and Pascal Nicklas discuss the requirements and potential of empirical research into the reception of adaptations: adaptation is one key strategy in the creation of literature and art in general. The creative process and product of adaptation has its counter-part on the side of reception. Empirical research into the aesthetics of adaptation aims at the experimental elucidation of the physiological background and the establishment of a model describing the perceptual underpinnings of the act of seeing an adaptation as adaptation. This implies evolutionary biological reasoning concerning the memory tasks required for this kind of perception and experimental work showing neuronal, psychological and perceptual specificities contrasting acts of reception of artistic and non-artistic stimuli. A particularly promising arena for model building research lies in poetic language and rhetorical structures of repetition.

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Marion BEHRENS, Christian KELL, and Pascal NICKLAS

Toward an Aesthetics of Adaptation in the Empirical Research of Literary Texts

Literary history holds many examples of adaptation. Harold Bloom distinguished in his 1973 *The Anxiety of Influence* between "weak" poets succumbing to the force of influence by the poetry they had read and "strong" poets producing original poetry. Making the case for "strong" poets and their originality, the model also testifies to the power of influence in poetic imagination. The term "influence" has lost some of its shine and significance in the decades of poststructuralist poetics while it formerly signified the foundational idea of a whole methodological branch of comparative literature: influence studies were one of the earliest fields where studies in comparative literature could claim a specific competence (see, e.g., Corbineau-Hoffmann; Balakian; Block). Literary history based on the concept of influence hinged on the importance of the historical and psychological entity of the author. In turn, scholars employing poststructuralist approaches did away with the author figure to a large extent arguing for Roland Barthes's 1967 (misunderstood) concept of the "death of the author" where originality was no longer an important category characterizing literary merit. Next, intertextuality became the predominant model of literary poetics and aesthetics pushing authorship into the background and Linda Hutcheon's and Siobhan O'Flynn's notion in *A Theory of Adaptation* of interconnectivity suggests of (not only literary) texts, but that adaptation is a creative product and process in which earlier works are revisited in later works. This mode of production meets a mode of reception in which the pleasure of reading derives from the recognition and reflection of the adaptation as adaptation. Just like a repetition is only a repetition for recipients when they become aware that what they are just reading has been read before (see Lobsien 15), an adaptation becomes only perceptible as such when the recipient is aware of the revisionary character of the respective work and has sufficient knowledge of the prior work to permit comparison. Only the recognition of the former work in the new work makes the latter an adaptation in terms of reception. This anagnorisis is the cardinal point which motivates recipients to encounter the same work of art repeatedly in its new vestiges. The incessant reiterations of myth in oral culture and the repeatability of readings in literary cultures indicate the importance of adaptations for recipients. Hence, the poetics and aesthetics of adaptation suggests a perceptional and physiological dimension of this trait in aesthetic behavior.

Empirical aesthetics in the study of literature is by definition restricted to research into modes of reception because the production side is covered by poetics. Creativity, however, is not the sole feature of poetics because models of reader response theory have rightly stressed the importance of the reader's activity in the creation of textual meaning (see Schrott und Jacobs 494). The effect of the aesthetic stimulus is dependent on the subjective dispositions, creative abilities as well as the reading and viewing listening habits and the experiences of the recipient. Empirical aesthetic research into adaptation, therefore, concentrates on the recipient who establishes an adaptation as adaptation by the recognition of the adaptation as a revision of a former work. While the institutional origin of adaptation studies lies in the field of literature on screen (see Cartmell and Whelehan), recent work in adaptation studies has stressed the multimedia, inter-art, and inter-media character of adaptations in the age of media-convergence and participatory culture (see Bruhn, Gjelsvik, Hanssen; Nicklas and Voigts). In terms of comparative literature, adaptation studies represent a new approach in influence studies because the underlying conception of authorship in the former is outdated and because the aesthetic implications of the latter are replaced by a concept of mediality.

New methodology makes new questions possible including the introduction of functional magnetic resonance imaging (fMRI) and neuroscience allows for a better spatial resolution in brain-mapping and its functional inferences. Together with the electroencephalogram (EEG), which has a better temporal resolution, functional imaging permits the identification of neural correlates of subjective reactions to artistic and literary stimuli. However, as empirical aesthetics is not identical with neuro-aesthetics (see Chatterjee), there is an array of other empirical means such as like questionnaires, gaze analyses, and the physiology laboratory underlining new approaches to emotional and cognitive reactions. The availability of the technical resources has improved over the past years. While empirical aesthetics used to be a marginalized field in psychology (see Allesch), there are numerous international interdisciplinary groups working on problems of aesthetics usually including psychological expertise. Recent research into the aesthetics of adaptation involves experiments where cognitive and technical expertise comes from psychology and neuroscience expertise while research in aesthetics is contributed by scholars in the humanities. This is combined with the -- at times speculative -- theoretical background of evolutionary biology. For a model of the aesthetics of adaptation this involves an attempt to find out why the recognition of adaptations as adaptations is pleasurable. We argue that this will be answered by an evolutionary biological reasoning explaining the function of the specific act of recognition by relying on a certain performance of memory and that evolutionarily reasoning represents and advantage to structure incoming sensory data and to sort patterns according to their relevance and familiarity. Increasing familiarity with specific structures facilitates faster processing and more efficient decision making. Memory and learning strategies play a key role in this scenario: for example, the effect of the pathological narrowing of the perceptual horizon is observable in patients suffering from Alzheimer's disease. The degeneration of the hippocampus entails a reduced power to consolidate fresh memories. The reaction to new contexts becomes difficult while familiar contexts allow patients to simulate normal behavior for some time depending on the progression of the degenerative process. Recognition of an adaptation as adaptation is a two-step task of memory. The first step is the establishment of a pattern through reading the "original." The next step is the processing of the data in the act of perceiving the adaptation and then connecting it to the memories of the "original."

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The brain's biological evolution is not concomitant with the evolution of cultural faculties: abilities like reading or calculation have developed with great speed and have become socially important in a historical frame of time which is too narrow to leave any trace in the genome. This means that certain features of the brain have developed before the introduction of cultural practices which require brain activity and connectivity. This has the effect that cultural skills change the biology of the brain by taking over areas which were originally formed for different tasks. Inversely, however, it also means that the brain's structure influences how culture can manifest itself. Stanislas Dehaene suggests that "we should stop thinking of human culture as a distinctly social layer, free to vary without bounds, independent of our biological endowment" and that, on the contrary, "cultural inventions such as writing are only possible inasmuch as they fit within our pre-existing brain architecture" ("Inside" <http://dana.org/Cerebrum/Default.aspx?id=39494>). Hence there is reciprocity in the relationship of biology and culture which has its limits where physiology does not budge (see Miall and Kuiken, "The Form" 331). Dehaene summarized his own and his colleagues' research making important points about the interdependency of biology and culture arguing that the neural correlates of the aesthetics of adaptation are the mechanisms of neural recycling and cortical competition. The fact that reading as a cultural skill developed less than 5000 years ago and had not spread to large parts of the population until 100 years ago means that the evolution of the brain's hard-wiring has not been involved in adapting to the changes entailed by the acquisition of this complex and neurally demanding skill. Neither natural nor sexual selection did have any chance yet to favor good reading skills as a selective criterion. Hence the structure of the brain does not show in its physiology any adaptation to reading. And yet, fMRI detects clear functional differences between the brain of a nine-year old dyslexic and a nine-year old who is a good reader: their brains show different activation patterns.

The so-called "letterbox" (see Dehaene, *Reading*), the area where most of the neuronal activity can be measured in word-recognition, is a distinct area which is specialized in recognizing words even when we do not notice what we are reading when words are flashed at us so briefly that we do not notice them consciously: "The visual word form area -- the brain's letterbox -- is a small region of the human visual system that systematically activates whenever we read. It shows a stronger activation to words than many other categories of visual stimuli, such as pictures of objects, faces, or places. In all of us, it is systematically located at the same place within a 'mosaic' of ventral preferences for various categories of objects. And, if it is destroyed or disconnected … we may selectively lose the capacity to read" (Dehaene, "Inside" <http://dana.org/Cerebrum/Default.aspx?id=39494>). According to the hypothesis of neuronal recycling introduced by Dehaene and Laurent Cohen, an area of the brain which has become specialized in one task can be recycled to become the site for cultural task which developed later. Dehaene, Laurent Cohen, José Morais, and Régine Kolinsky hypothesize that the acquisition of literacy transforms the human brain and how the functions of core brain systems are partially reoriented or "recycled" when learning to read and suggest that the acquisition of literacy improves early visual processing and reorganizes the ventral occipito-temporal pathway and that responses to written characters are increased in the left occipito-temporal sulcus whereas responses to faces shift towards the right hemisphere. Literacy also modifies phonological coding and strengthens the functional and anatomical link between phonemic and graphemic representations. The acquisition of literacy therefore provides a remarkable example of how the brain reorganizes to accommodate a novel cultural skill. It shows that the area which is specialized in recognition of faces, on the one hand, becomes responsible for word-recognition and, on the other hand, it is displaced to an area which Dehaene and his collaborators do not characterize further. Comparing nine-year-old good readers and nine-year-old dyslexics by fMRI while they are reading shows the effects of neuronal recycling and cortical competition. The comparison of two healthy adults -- one a good reader and the other an illiterate not affected by dyslexia -- would, however, be more convincing because it is not fully resolved what effect the pathology or the etiology of dyslexia has on further functional specializations of the still developing brain of a child (see Dehaene, Cohen, Morais, Kolinsky; Monzalvo, Fluss, Billard, Dehaene-Lamb).

The visual areas specialized in word-recognition, face, objects and checkerboards are highlighted. "Good readers show a well-developed visual word form area (shown in green), a region that responds to written words more than to other categories of visual stimuli (faces, places, or checkerboards). Dyslexics show no such specialization for written words, and also exhibit a much weaker activation to faces in the right hemisphere. The evidence suggests that literacy involves a specialization of the visual word form area in the left hemisphere and, as a result, the displacement of face responses to the right-hemisphere two processes that fail to occur in young dyslexics" (Dehaene, "Inside" <http://dana.org/Cerebrum/Default.aspx?id=39494>). Here, the effect of cortical competition can be seen. Areas which were dedicated to specific activities in the course of the brain's evolution are over-written like a palimpsest where the old text is not visible anymore but still present underneath. "The model [of cortical competition] predicts that, as cortical territories dedicated to evolutionarily older functions are invaded by novel cultural objects, their prior organization should slightly shift away from the original function (though the original function is never entirely erased). As a result, reading acquisition should displace and dislodge whichever evolutionary older function is implemented at the site of the visual word form area" (Dehaene, "Inside" <http://dana.org/Cerebrum/Default.aspx?id=39494>).

The models of cortical competition and neuronal recycling are useful to establish the aesthetics of adaptation because they enabling hypothesizing neuronal modifications entailed by cultural practice. Just like face recognition is assumed to be over-written by word-identification, the adaptation-specific mechanism of retrieval of memory contents in art perception may recycle the network developed for similar tasks in non-artistic contexts. The distinction between the artistic and the non-artistic is essential to the aesthetics of adaptation because it opens up new vista on the connection between art and evolution. The aesthetics of beauty can rely on the explanatory contexts of sexual selection to show why

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the appreciation of beauty in art seems to be hard wired and universal across cultural borders (see Chatterjee; Menninghaus). However, much of art or literature does not concern itself at all with beauty. In contrast, the concept of the aesthetics of adaptation can account for pleasure stemming from art and literature without recourse to beauty. Instead, memory becomes one of the central heuristic motives. The reception of art thereby becomes not in itself part of the evolutionary rationale but it is a social and cultural practice which serves important functions in a development not directly linked to a change in the genome through evolution. An aesthetics of adaptation as such does not rely on evolutionary reasoning for its raison d'être despite its connection to the evolutionary development of the brain through neuronal recycling and cortical competition. It takes over structures and circuits -- like face-recognition -- which were shaped in the age-old forge of evolution and transforms them through cultural learning. Thus, evolution plays a certain role in providing the respective structures and circuits, but the explanation of the cultural practice is not entirely explained by evolutionary moulding. While the memory mechanism is firmly anchored in the reward system because of the importance of proper recognition in real world terms, the same process in art and literature reception is rewarded because it recycles the hard wiring of the mechanism directed at the non-artistic world. On the basis of this neuro-cortical modelling of the recipient's recognition of adaptations as an interaction of cortical competition and neuronal recycling, it becomes necessary to work out in visual perception and processing the difference between art and non-art as well as, on the level of literature, the specifics of a literary reception of language versus non-literary reception. The pleasure derived from receiving adaptation as adaptation is not merely another learning procedure but it is a culturally over-written form of learning and pleasure. In this reasoning, the function of the pleasurable reception of literature and art lies perhaps in being a training-ground for faculties directed at the real world. There is ample evidence that different neuronal networks are activated in contexts which are identified as "real" versus "artificial" or literary and there is a deeply rooted fact-fiction divide in many cultures which can be identified in infant development: it appears to be only consequential to first establish this difference in the context of adaptation reception and then to study how adaptation reception works within purely aesthetic systematics in a next step.

The differences between fiction and reality and between the "artistic" or "artificial" and the "authentic" are intuitively clear. At least in Western cultures many social institutions rest on those distinctions and healthy people have a sharp distinction between the different worlds and can ascribe the respective terminology correctly. Children learn early how to distinguish the different categories and are soon proficient in discerning them (see Woolley and Cox; Woolley and Ghossainy; Woolley and Wellman). The mere existence of dubious cases gives proof to the firmness with which the distinction is established. In aesthetic theory, however, the distinction between art and non-art is not at all clear and depends very much on specific contexts. Also, "fictional" and "artistic" or "artificial" are not synonyms but cover different though at times overlapping ground. In texts, the category of fictionality refers to the relationship the text bears to reality, the artistic quality of a text is the stylistic level of its rhetoricity while "authentic" is a fairly meaningless term of value judgment often proclaimed in non-academic criticism (see Richter). It seems easy to dismantle any argumentation resting on the seemingly facile and irreverent use of aesthetic terminology. This, however, touches on a more general problem in empirical aesthetics which can only be commented on in this article but not discussed in detail: there is a massive divide between the philosophical or academic use of terminology and language-use by non-experts. With respect to art it is already well-documented that there are differences in art perception by experts and "laypeople" (Leder, Oeberst, Augustin; Koide, Kubo, Nishida, Shibata, Ikeda). Our professional and social background also influences which meanings we ascribe to words like 'sublime' or 'artful.' There is, however, no established research context for this in empirical aesthetics yet. A subject in an experiment would react very differently to a word like 'authentic' if this subject was a humanities professor or one of the five in six German males who do not enthusiastically read books. So, when we want to test – as we did in the experiment described in the following – the difference between art and non-art, we have to exclude participants with a background in art history or philosophical aesthetics.

Trying to find out which different reaction subjects have to artefacts they think to be art or non-art is very similar to looking at reactions to what is thought to be fictional or real. There has been a small number of studies showing that subjects regularly make distinctions between these domains (Abraham, Cramon, Schubotz; Abraham and Cramon; Altmann, Bohrn, Lubrich, Menninghaus, Jacobs). In order to identify the neural areas that correlate with the distinction between real vs artificial stimuli and in order to see how different networks are responsible for this categorizing process, we conducted a series of experiments involving fMRI. From this data we present first findings which strongly corroborate earlier interpretations by other scholars and encourage further adaptation-specific research. With regard to method, our study includes stimuli of 47 photographs of real sceneries and 47 contrived pictures selected from open-access internet image databases. We selected the photographs such that they, on the one hand, had semantically matching motifs in both a natural snapshot and a contrived representation and, on the other hand, that they balanced animated versus non-animated content. Images from advertisements and films as well as photographs altered by image editing programs or photo-realist paintings were considered as contrived representation. Additionally, the picture collection was composed to represent a broad range of presumed artificiality. All images were presented to subjects in a randomized order using a presentation software for 100ms each. Earlier studies have shown that an adequate perception of the image content is possible even at such a short time spans (see Li, Iyer, Koch, Perona; Kirchner and Thorpe; Liu, Agam, Madsen, Kre). The very short exposition of the images minimized eye-movement of the participants thereby preventing them from scanning the images in order to gather more indications about their status as natural or artificial. As in-between stimulus presentations, a fixation cross was presented to further minimize eye movements.

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Participants were asked to assess all stimuli for their degree of artificiality on a range from one to nine, assigning the value one for the lowest and nine for the highest perceived degree of artificiality. The instruction given was "On a scale from 1 to 9, how natural (1) or how artificial (9) is he following image?" (translation from the German by the authors). Responses were registered with a standard computer keyboard. The pictures were coupled in the sense that there would always be one image of the same motive which was relatively more artificial and one which was relatively more natural. The examples of dirty dishes shown here are obvious in their allocation on the scale because one is Roberto Bernardi's photo-realist painting "Dirty Plates" while the other is a finding from Flickr free for non-commercial use.

Figure 1. A natural and an artificial image used as stimuli

Subjects rated 47 real photographs and 47 contrived scenes for their subjectively perceived degrees of artificiality on a range from one to nine. Note that the pictures were purposely selected to be of a wide range of artificiality and to some extent even of doubtful natural character to induce individual assessments. As a consequence, the given artificiality rating showed a significant difference in the given ratings for stimuli of real (mean = 3.06) and contrived (mean = 5.85, $p < 0.001$) origin as well as a high inter-individual range (mean range = 6.05). This indicates that while in general real pictures can reliably be dissociated in natural and artificial representations, the inter-individual assessment of artificiality is strongly driven by subjectivity. In extreme cases, one and the same picture could be rated as being "clearly natural / 1" by a subset of participants while others judged the same scenery as "clearly artificial / 9". Therefore, the analyses of brain responses to the exposure to real or contrived pictures have to be grounded in a subjective classification rather than in averaged group responses.
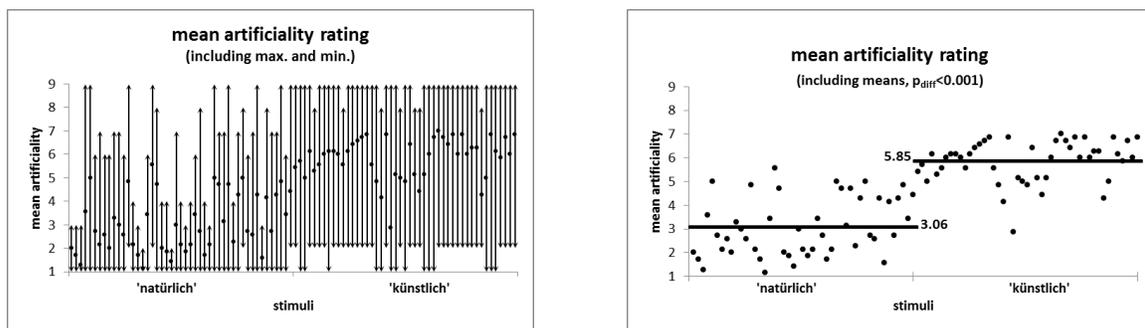
Figure 2. artificiality rating

There are a number of important points to be drawn from the experiment. The first and most important one, which is at the same time unsurprising, is that subjects felt comfortable with the task. There was no problem for them to understand the task and make the distinction. Considering the brevity of exposition time, it was a surprise, however, how quickly subjects can make a fairly complex decision which is based on a number of riddling criteria. Why would someone think that this or that picture is more or less artificial? What are the technical or semantic qualities of the pictures relevant to this decision? These questions are pursued by our group in another study. We were not so much interested in the objectively correct ascription of the values; instead, subjectivity was key to our set-up. Still, despite the variance particularly in the artificial subset of images the distinction is often made with surprising accuracy. The high degree of subjectivity in the identification, on the other hand, points to the importance of cultural learning involved in the acquisition of the skill to distinguish natural from unnatural stimuli. As we know, expertise in art makes a difference. Thus we chose only art-naïve subjects for the

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study to exclude data distortion through expertise bias. The result clearly shows that there is a reliable distinction between the realms of reality and art on a behavioral level. In addition, first glimpses at the fMRI data from other studies suggest that there will be similarly robust supporting the hypothesis that there is clearly a difference in the neural correlates of processing subjectively rated artificial or natural material. Thus our study has implications for research into adaptation as one of the fundamental mechanisms underlying perceptional patterns of reception. The coupled images show the same motif with the difference that one of the images is more artificial. The task, however, was not to compare the images but just rate them in order to show that subjects were sensitive to the scale on which they were making the distinction which indirectly shows their sensitivity to the difference. Now, the next step is to have a closer look at the memory task of remembering the sameness and see to what extent the successful act of memory is pleasurable.

The kind of adaptation Linda Hutcheon has in mind in her *A Theory of Adaptation* is the adaptation of a whole work, but in times of media convergence and participation culture the spectrum of adaptations has become much wider and more recent definitions of adaptation are not limited to the adaptation of complete works (Nicklas and Voigts). Breaking adaptations down to researchable structures with the methodology of empirical aesthetics requires, however, a further degree of reduction and an even more liberal definition of adaption (clearing common misunderstandings of reductionism, see Van Peer, Hakemulder, Zyngier 23-30). Of course, it is possible to have whole seminar groups read a book, then watch a filmic adaptation and afterwards ask them about their feelings or even develop a questionnaire probing into the reception behavior of the students. Interesting as that might be, it is more promising in order to detect cognitive and neuronal activities underpinning these processes of reception to use smaller samples which do not activate the entire spectrum of art appreciation in cognitive and emotional respects. To arrive at the level of complexity which is better researchable with the empirical aesthetics toolbox and which yields more specific results, it is helpful to develop a routine based on small samples.

The basic structure of an aesthetic adaptation is the paradoxical formula of "the same with a difference." This paradox raises fundamental questions about the content of adaptations: what is it actually that is adapted in an adaptation? Traditionally, particularly in literature where the medium of the message, language, plays a vital part in the constitution of the meaning, form and content cannot be taken apart without destroying the entire work. A prose summary of a Shakespeare sonnet in one sentence would not be regarded as possible. The stylistic devices of the text, its rhetorics are working destabilize any perceived surface meaning, making the performance of the text its message. This is to say one cannot separate the content and the formal structure of the text. And yet, looking at the tradition of European Petrarcism we see one of the arenas where the imaginative workings of adaptation become most obvious. The same elements keep being shuffled around. Originality is in the rearrangement of the known materials. It is always the same – but it is always different. Shakespeare's sonnet 130 would make much less sense without its reference to the standards of poetic beauty established in the 250 years of poetry before. The pleasure of reading sonnet 130 and following its description of a dark lady derives to a large extent from harking back to the standards of beauty and the trope of Petrarca's golden-haired Laura.

The question of what is adapted is not to be answered in one single formula. It might be specific images, it might be formal aspects, it might be the plot. One might wish to revisit questions of medium specificity (see Hutcheon 33) to find an answer to what it actually is that is adapted. Looking at the question not from the side of production but from the side of reception replaces the difficult dimension of identity with that of memory. What makes an adaptation an adaptation for the recipient depends entirely on the subjective power of remembrance and recognition. If recipients do not recognize *West Side Story* as an adaptation of *Romeo and Juliet*, then they will not show the behavioral, cognitive, emotional, or neural patterns characteristic of seeing an adaptation as an adaptation. Might there not be a subliminal remembrance which does not reach consciousness but still shapes the recipient's reaction? Making the question of adaptation hinge on the recipient raises further, admittedly theoretical, questions: would it be possible to have the recipient think that something is an adaptation even though it is not? Could there be phantom adaptations so to speak? There are a great number of research perspectives which lend themselves to empirical experiments elucidating the cognitive-affective dimensions of reading concerning the recall of former reading memories. One can even take this further, because there is not only the dimension of intertextuality, but also the dimension of intermediality: texts are not only adaptations of other texts but also of, for example, staged plays, television series, a movie, or multi-media contents from the internet. All of this raises questions about the knowledge and experience gathered by the individual reader. In our experiment, it was, therefore, necessary to exclude art-experts while so-called ART-tests could be seen as providing access to a gradual measurement of participants' proneness to identify adaptations in literary texts (see Acheson, Wells, MacDonald). For empirical research into the memory function a holistic approach is, however, not necessarily the best choice. To test specific effects in fMRI or EEG, there needs to be a clearly identifiable stimulus. Hence, as so often in empirical work, there is a need of reductionism choosing minute samples in order to avoid blurry or noisy signals. This is why we suggest concentrating on small literary texts which are more easily handled by both readers and researchers.

In terms of literary language and its rhetorical figures, the notion of "the same with a difference" manifests itself most obviously in repetition (see Lausberg 310-336). There is a host of repetition structures on different levels: starting from the micro-level of repeating letters, syllables, and sounds to the meso-level of word repetition to macro-level of repeating clauses, phrases, and finally ideas. These structures are not only to be found in literary language. And what is literary language anyway? We would argue that despite all difficulties of definition there is – like on the level of the distinctions between art and non-art or artificial and natural or fictional and real (see above) – a distinction between literary

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and non-literary language (for a brief but detailed discussion see Jacobs). Further, there has been an on-going debate about the nature of literature in terms of its linguistic singularity. It seems that none of the extreme positions will do by itself: neither formalism, nor post-structuralism, nor a purely sub-jective reader response theory can sufficiently explain literariness. Roman Jakobson and his proto-typ-ical formalist position was criticized by Marie L. Pratt who would not deny that literary texts have a strong rhetoricity but tried to show that "the failure lies in the attempt to use those observations as a basis for distinguishing texts that are not held to be literature from those that are" (36). Irrespective of the question whether Pratt's own speech act theory of literary discourse will do by itself, her criticism points towards a comprehensive theory of literariness which includes the actual reader – like David Bleich's subjective criticsm (101) and unlike Wolfgang Iser's ideal or implied reader – and reflects the reading context (Miall and Kuiken "What is?," "The Form," "Foregrounding"). This would include ques-tions of genre and text types (Hanauer, "The Genre-specific," "Integration") which influence the dispo-sition of the reader to activate certain attitudes and the specific kind of attention reserved for a "good read." Arthur M. Jacobs takes a pragmatic position enabling empirical research (see also Schrott and Jacobs). For our purposes, this distinction between literary and non-literary reading is paramount in terms of recipients' subjective certainty about what they are doing because this difference in attitude translates into a difference of neuronal correlates (and functionality) like the fact-fiction divide in the processing of visual or narrative stimuli.

On the basis of such a working definition of literary language, adaptation can be researched not only on the macro-level of for example re-writings like J.M. Coetzee's *Foe* (1986), but on the micro-level of literary language in conspicuous structures like rhyme, assonance, alliteration, anaphora, and epistro-phe. These rhetorical devices are so firmly rooted in the poetical traditions of Europe that any text today with a great number of these self-similar structures will set free a complex state of mind in the reader. There are strong expectations in readers how poetry traditionally works and there are many genres in poetry written by people who would normally not consider themselves to be poets. These texts are informative about the textual sensibilities and the kind of structures subjects expect from literary texts. Repetition is one of the features which is most salient in this context and can be seen as one defining characteristic of literary language (Fischer; Lobsien; for the more anthropological implications of repe-tition see Csúri and Jacob; Jacobs; for cognitive poetics see Horváth). Repetition has a perceptual quality which makes it particularly interesting in terms of the aesthetics of adaptation: the repeated A is never identical with A because its perception and Eckart Lobsien formalizes this as (A) and A°[A] and points out that "repetition is to be described as a two-step operation: something is perceived and then qualified as a repetition" (15). Even if the element is repeated identically as in an identical rhyme, the repetition of the element is not identical with the repeated element. In rhyming, except for identical rhymes, there is always only a partial identity of the rhyme-word which entails an added quality of repeating something of the former text and also giving new semantic input. Thus it is the structure of conventional rhyming which corresponds most clearly to the structure of adaptation inasmuch it is the same with a difference. Generally, the fulfilled expectation of an element's repetition, an unexpected repetition, or, reversely, the meaningfully disappointed expectation of a repetition is a source of pleasure derived from the suc-cessful completion of a memory task – which brings us back to the prolegomena of an aesthetics of adaptation.

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