Immersing in the Stillness of an Early Morning: Testing the Mood Empathy Hypothesis of Poetry Reception

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Although poetry reception is often considered to be a highly emotional process, psychological research on emotional experiences when reading poetry is anything but abundant. Most research on poetry reception addresses the influence of poetic devices like meter and rhyme on readers' comprehension, appreciation, and the recollection of the poem. Empathic reactions and emotional involvement as described, for example, in studies on reading narratives are rarely discussed. Here, we propose that poetry is predisposed to induce a variety of different kinds of affective responses and feelings. In particular, we put forward the *mood empathy hypothesis*, according to which poems expressing moods of persons, situations, or objects should engage readers to mentally simulate and affectively resonate with the depicted state of affairs. We report evidence that this resonance can lead to the experience of the depicted mood itself, or some feeling closely associated with it, a process similar to empathy as a kind of *Einfühlung* or *feeling in*. Our results are interpreted in the larger frame of the neurocognitive poetics model of literary reading (Jacobs, 2011, 2014). In line with the model's postulate that backgrounding elements facilitate emotional involvement while foregrounding features promote aesthetic evaluation, we identified different predictors for both processes: familiarity and situational embedding were the main factors mediating mood empathy, and aesthetic liking was best predicted from foregrounding features like style and form. By supporting the *mood empathy hypothesis*, these findings open new perspectives for future studies on literary reading and poetics.

Keywords: mood empathy hypothesis, immersion, poetry reception, aesthetics, neurocognitive poetics model of literary reading

Poetry is a fundamental component in the reading curriculum (Elster & Hanauer, 2002), and despite the fact that poetry is often understood as an outdated genre of literature, it also is an integral part of our everyday life: Poems are recited at ceremonial occasions, they are used as lyrics for popular melodies, and they are also enjoyed by interested readers in their leisure time. When one reads a poem, the lines can activate different thoughts, memories, and emotions, which taken together seem to fulfill the poet's aesthetic purpose (Lea, Rapp, Elfenbein, Mitchel, & Romine, 2008; van Peer, Hakemulder, & Zyngier, 2007). Readers reflect on their reading experience to appreciate the beauty of a poem and its emotional or intellectual impact (Kintsch, 2012). Reading and listening to poetry seem to be a highly affective process leading to affective and emotional experiences (Cupchik, 1994; Cupchik,

Oatley, & Vorderer, 1998; Schrott & Jacobs, 2011; van Peer et al., 2007). Some readers describe being touched by the theme or starting to share the mood of the described situation when reading poetry (Miall & Kuiken, 1999; Sikora, Kuiken, & Miall, 2011), other readers use poems to influence their present feelings and moods. However, in the fields of psychology and reading research, empirical work dealing with emotional experiences when reading poetry is anything but abundant, much like experimental research on *literary* reading in general, although specialized journals like *Poetics* and *Scientific Study of Literature* offer many fascinating examples.

The emotional side of reading is most often explored in reading narratives (Mar, Oatley, Djikic, & Mullin, 2011; Cupchik, Leonard, Axelrad, & Kalin, 1998). Indeed a variety of emotional reactions toward narratives could be observed in a number of experimental and exploratory studies using behavioral measures (Appel, Koch, Schreier, & Groeben, 2002; Busselle & Bilandzic, 2009; Cupchik & Laszlo, 1994; Cupchik et al., 1998; Mar, 2011; Mar et al., 2011; Oatley, 1995; for review see Jacobs, 2011). In a seminal article, Oatley (1995) developed a taxonomy of emotions of literary response. This taxonomy differentiates between two kinds of emotions: On the one hand, emotions that arise from an encounter with a literary work as if from the outside, and on the other hand emotions that arise specifically from entering a narrative world. The first kind is often called aesthetic emotions and includes emotions such as admiration and appreciation of beauty,

assumed to be based on the evaluation of the literary work as a whole as perceived from a certain aesthetic distance (Cupchik, 1994, 2002), and on the evaluation of its style, proportion, or place in tradition (Mar et al., 2011). In a broader sense, these emotions are understood as intense feelings encompassing the perception, production and responses to art, which are often described as pleasure or feeling beauty (Bohrn, Altmann, Lubrich, Menning-haus, & Jacobs, 2012, 2013; Cupchik, 1994; Chatterjee, 2011; Kintsch, 2012; Perlovsky, 2010; Silvia & Brown, 2007). In reading, aesthetic emotions can occur in combination with nonaesthetic feelings like narrative emotions, the second kind proposed by Oatley (see also Miall & Kuiken, 2002). This second kind encompasses, for example, empathy, sympathy, and identification (Mar et al., 2011), as well as vicarious anger or fear, and suspense (Jacobs, 2011, 2014). Whether this category of emotional experiences could be identified for literary forms other than narratives or whether other kinds of feelings like moods could also be understood as forms of narrative emotions is an issue not explicitly discussed in the literature.

Moreover, up to now, empirical work on reading poetry focused on the recognition and usage of *foregrounding* features. It explored whether and which stylistic features of a poem yield information used by the reader for an initial genre decision, for comprehension, or for aesthetic evaluation (Carminati, Stabler, Roberts, & Fischer, 2006; Hanauer, 1995, 1996; Hoffstaedter, 1987; Jacobs, 2014; Menninghaus, Bohrn, Altmann, Lubrich, & Jacobs, 2014; Miall & Kuiken, 1994; Obermeier et al., 2013; van Peer, 1986, 1990; van Peer et al., 2007). In studies by Hanauer (1997, 1998) and van Peer (1986), for example, lines foregrounded by stylistic devices of parallelism or defamiliarization were marked as important for the understanding and the discussion of a poem's meaning and were also better remembered. Likewise, the metrical version of a poem leads to an increase in the aesthetic evaluation and appreciation (Menninghaus et al., 2014; Obermeier et al., 2013; van Peer, 1990), and the detection of rhyme violations may evoke an emotional response (Scheepers, Mohr, Fischer, & Roberts, 2013). This is in line with classical "structuralist" and "formalist" positions on poetry, such as Jakobson's (1960), who assumed that poetry is a group of text dominated by the poetic function that puts the focus on the linguistic features of the text itself. In Jakobson's extended version of Bühler's (1934) organon model, the poetic function is one of six major functions reflecting the communicative usage of all kinds of language.

Perhaps due to this concentration on aesthetic effects of foregrounding, emotional reactions comparable with the narrative emotions discussed above (e.g., Mar et al., 2011) have not been investigated in detail for reading poetry (but see Menninghaus et al., 2014, for a study on humor; cf. also Scheepers et al., 2013). This is surprising given that poems are a type of text which possesses a strong emotional component in a highly compressed manner (Piirto, 2011; Schrott & Jacobs, 2011). We assume, although, that poems are an obvious choice for an empirical investigation of emotional reactions and specific forms of emotional involvement. If poetry is seen as an art form in which intended meanings of the text elements always go beyond what is merely stated, it should be predisposed to induce a variety of different kinds of emotions and feelings in readers during and after reading (cf. Mar et al., 2011; Schrott & Jacobs, 2011; van Peer et al., 2007).

In line with several other theories (Cupchik, 1994; Iser, 1976; Miall & Kuiken, 1994; Oatley, 1995; van Peer et al., 2007), the neurocognitive poetics model of literary reading (Jacobs, 2011, 2014; see 2013;) proposes that any kind of literary text elicits both nonaesthetic and aesthetic feelings and their underlying neuronal correlates as a function of its *backgrounding* and *foregrounding* features. Basically, it hypothesizes a dual-route processing of texts with poetic features: a fast, automatic route for (implicit) processing texts which mainly consist of backgrounding elements informing the reader about the facts of a story; and a slower route for (explicit) processing of foregrounded text elements. The fast route is hypothesized to facilitate immersive processes (transportation, absorption) through effortless word recognition, sentence comprehension, activation of familiar situation-models, and the experiencing of nonaesthetic, narrative or fiction emotions, such as sympathy, suspense, or "vicarious" fear and hope. The slow route is assumed to be operational in aesthetic processes supported by explicit schema adaptation, emotions referring to the text as an artifact (Kneepkens & Zwaan, 1995), and the ancient neuronal play, seek, and lust systems which according to Panksepp (2008) and Jacobs (2011) are involved in affective and aesthetic processes in reading, evolution not having had time to develop proper pleasure systems for art reception or reading (for evidence for this assumption cf. Bohrn et al., 2013; Cupchik, Vartanian, Crawley, & Mikulis, 2009, or Di Dio, Macaluso, & Rizzolatti, 2007).

The original model—designed primarily as a heuristic tool to generate and guide interdisciplinary research on literary reading—addressed prose processing only, but a recent extension (Jacobs, Lüdtke, & Meyer-Sickendiek, 2013) allows to cover poetry reception, in particular the question under which conditions immersive processes are possible when reading poems, and to what extent such processes exclude or hinder the aesthetic experiences traditionally associated with poetry reception. This extended version also tries to sharpen the understanding of foregrounding and backgrounding elements. In his seminal theory of foregrounding, van Peer (1986) described foregrounding as a "pragmatic concept referring to the dynamic interaction between author (literary) text and reader" (p. 20). He identified it through stylistic analysis and operationalized foregrounding and backgrounding at the level of the text itself. Each passage that could be identified as prominent due to parallelism or defamilarization is part of the foreground; all other passages are the background against the foreground figure. Extending this view, the neurocognitive poetics model also specifies neurocognitive processes associated with reading foregrounding and backgrounding elements. According to this view, each single line of text can offer both foregrounding and backgrounding elements. The poem depicted in Figure 1 delivers an example how backgrounding elements like the well known words "Weg" (way) and "Stadt" (city) may activate familiar situation-models, and at the same time line brakes within phrases (cf. Lines 1 and 2) are foregrounding devices which may activate the slow route in the model. Therefore, it is possible that both routes, the slow and the fast, are activated side by side, as was found to be the case in the reading of defamiliarized proverbs which can evoke feelings of beauty (Bohrn et al., 2012, 2013). The original model which is developed on more than 30 printed pages in the book by Schrott and Jacobs (2011) also postulates a linking between different kinds of feelings and a dual route processing on a neuronal, an affective-cognitive, and a behavioral level. A detailed description of all
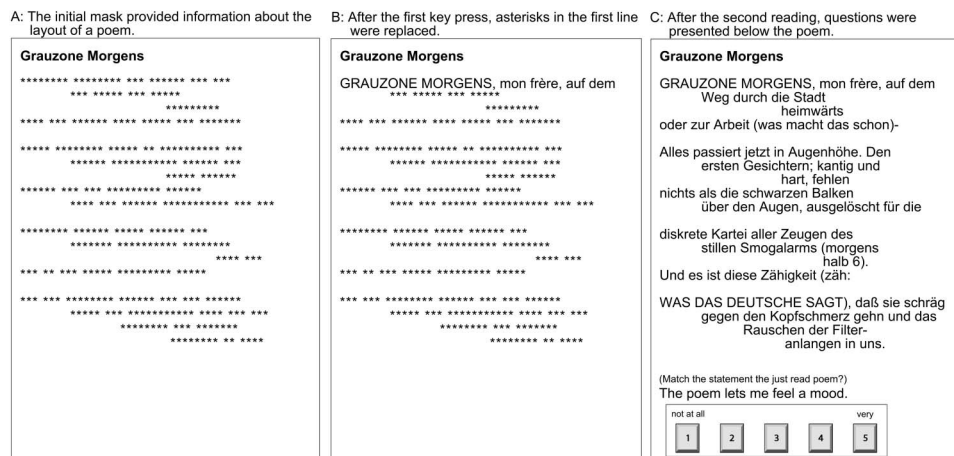
A: The initial mask provided information about the layout of a poem.

Grauzone Morgens

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******** ******** *** ****** *** ***
      *** ***** *** *****
            *********
**** *** ****** **** ***** *** *******

***** ******** ***** ** ********** ***
      ****** ********** ****** ***
            ***** ******
****** *** *** ********* ******
      **** *** ****** ********** *** ***

******** ****** ***** ****** ***
      ******* ********** ********
                  **** ***
*** ** *** ***** ********* *****

*** *** ******** ****** *** *** ******
      ***** *** ********** ***** *** ***
            ******** *** *******
                  ******** ** ****
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B: After the first key press, asterisks in the first line were replaced.

Grauzone Morgens

GRAUZONE MORGENS, mon frère, auf dem
      *** ***** *** *****
            ****
**** *** ****** **** ***** *** *******

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***** ******** ***** ** ********** ***
      ****** ********** ****** ***
            ***** ******
****** *** *** ********* ******
      **** *** ****** ********** *** ***

******** ****** ***** ****** ***
      ******* ********** ********
                  **** ***
*** ** *** ***** ********* *****

*** *** ******** ****** *** *** ******
      ***** *** ********** ***** *** ***
            ******** *** *******
                  ******** ** ****
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C: After the second reading, questions were presented below the poem.

Grauzone Morgens

GRAUZONE MORGENS, mon frère, auf dem
      Weg durch die Stadt
            heimwärts
oder zur Arbeit (was macht das schon)-

Alles passiert jetzt in Augenhöhe. Den
      ersten Gesichtern; kantig und
            hart, fehlen
nichts als die schwarzen Balken
      über den Augen, ausgelöscht für die

diskrete Kartei aller Zeugen des
      stillen Smogalarms (morgens
            halb 6).
Und es ist diese Zähigkeit (zäh:

WAS DAS DEUTSCHE SAGT), daß sie schräg
      gegen den Kopfschmerz gehn und das
            Rauschen der Filter-
                  anlangen in uns.

(Match the statement the just read poem?)
The poem lets me feel a mood.

not at all   very
[1] [2] [3] [4] [5]

Figure 1. Presentation of the poems and the poetry reception questionnaire.

aspects of the model clearly lies beyond the scope of this article (a graphical version can be downloaded from Jacobs, 2013). Although we ignore neuronal processes in this article, for simplicity and consistency, we will still refer to it as "the neurocognitive poetics model" or simply "the model." Here, we focus on its affective-cognitive and behavioral levels relevant for developing our hypothesis of mood empathy.

A major aim of our interdisciplinary research project on poetry reception is to explore the experience of emotional involvement. In line with the aforementioned model and other theoretical proposals, we assume that reading poetry causes not only aesthetic emotions associated with the appreciation of poetic features, but also other kinds of emotional involvement like empathy, special moods, or sadness. This assumption has classical roots. For example, in German Romanticism, poets like Goethe used impressionistic symbolism to make the reader reexperience the world through forms of *mood empathy* (*Einfühlung*).[1] The modern meaning of mood empathy goes back to Lipps' (1900) elaborated theory of *Einfühlung* which was based on older conceptions, for example, by F. T. Vischer. If there exists a category of poetry specifically marked by mood empathy, it should be predisposed to induce feelings (cf. Geiger, 1911). Goethe's poem *Wanderers Nightsong II*, for example, does not only describe a peaceful death, it is often interpreted due to its overwhelming force (cf. Eldridge, 2011).

Poetry of Mood

Poetry, the oldest form of literature (Schrott & Jacobs, 2011), can be understood as a form of metrical writing (Piirto, 2011), and a form of text that focuses on the message for its own sake, that is, the code itself and how it is used (Jakobson, 1960). One particular kind of poetry is lyric poetry, which has a strong emotional component, and makes use of imagery, especially of nature. In German poetics, German Romanticism was long considered as the only epoch in which this kind of poetry could be found.

A prominent example is the *Erlebnislyrik* (experiential lyric poetry) of Goethe (Mahoney, Schulz, & Bohm, 2004). It is assumed that classic lyric poetry not only expresses experiences, but also feelings and mood in the sense of Lipps' mood empathy. German poetics therefore refers to this special kind of poetry as

Stimmungslyrik (poetry of mood). Different theorists have assimilated the category of poetry of mood with the above mentioned epochal feature of German romanticism. However, current poetological research on the category of poetry of mood has shown that also modern and postmodern poems can be classified into this category. This is possible if the definition of poetry of mood is no longer tied to the epochal feature, but related to the concept of mood empathy and its phenomenological meaning (Meyer-Sickendiek, 2011). In his book *Lyrisches Gespür* (*Lyrical Sense of Feeling*) Meyer-Sickendiek developed five indicators (verbal, transitory, atmospheric, hypothetical, and rhythmic) for this kind of feeling based on the historically oriented discussion of mood empathy. More particularly, these five indications are: the explicit mentioning of the German verb *spüren* (*to sense*), the volatileness of the described emotional experience, the description of mood and emotional experiences as atmospheric phenomena (cf. the understanding of mood in the New Phenomenology, (Böhme, 2001; Schmitz, Müllan, & Slaby, 2011), the expression and not only the description of mood empathy, and a specific rhythmic pattern following a sequence of narrowing and widening. Meyer-Sickendiek proposes that a poem belongs to the category of poetry of mood if at least three of these five indicators apply. He used these indicators to generate a corpus of German poetry of mood which comprises both classical poems from German romanticism, and modern and postmodern poems.

This new poetological definition of poetry of mood is based on an understanding of mood that differs from the standard usage of this term in modern psychology. In the mainstream psychological literature, mood is understood as the current mental state of an individual characterized by inner experience and perception (Steyer, Schwenkmezger, Notz, & Eid, 1997). Moods are differentiated from emotions most often by the criteria of time course, specificity, and intentionality. Moods are understood as prolonged, vague, and intrinsically objectless phenomenal experiences (cf.

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[1] Which, literally translated, would mean "to feel in" and which could be understood as a form of art inviting one "to feel with the represented situation," to "resonate with an atmosphere," or to have "a felt unity with" or special access to the soul of nature and its phenomena.

Beedie, Terry, & Lane, 2005; Frijda, 1993; Siemer, 2005), that is, not bound to specific objects or situations (Steyer et al., 1997). The dimensional framework outlined by Wundt (1896) arranged moods within a space defined by two main dimensions: pleasantness–unpleasantness and arousal–calmness (Schimmack, 1999). However, as described above, mood can also be understood as the "atmosphere of an object, scene, or situation." According to this phenomenological approach, which converges with more recent phenomenological perspectives (Kuiken, Campbell, & Sopčák, 2012; Zahavi & Gallagher, 2008), objects can be, for instance, serene or calm. The German concept *Einfühlung* nicely captures this meaning. To "be in a certain mood" thus can be understood as empathizing with the atmosphere of a place or a situation, a form of affective and bodily resonance which might be grounded in sensory-motor and emotional memories of similar real situations (compare the notions of "felt sense" and "attunement to a situation;" Kuiken et al., 2012). In aesthetic theory *Einfühlung* is also discussed as a form of aesthetic evaluation (Wispé, 1986). It is possible to empathize with a serene landscape, because the landscape itself is serene thus enabling a mutual exchange between the landscape and the feeling subject. Forms of art that invited one to empathize with the represented objects/scenes in this way enabled and facilitated aesthetic appreciation (Wispé, 1986). Applying this notion of mood to the process of reading poetry suggests that poems inviting readers to empathize with its contents should produce strong feelings. Theoretically, therefore, poetry of mood, as characterized by emotional contents, should be able to induce the described mood (or associated ones) in the reader. If the phenomenal content is associated with the atmosphere and the situation itself, time is no longer a critical defining feature. In addition, the reading of poems should also elicit aesthetic feelings, because of the high amount of foregrounding elements highlighting the poetic function.

The Present Study

The aim of this study was to explore emotional experiences during poetry reception, in particular aesthetic feelings and emotional involvement, the latter being understood as empathizing with the moods and emotions depicted in the poems, that is, *the mood empathy hypothesis*. As described above, the slow route processing of foregrounding elements in Jacobs' model can be accompanied by feelings of interest and aesthetic liking, and the fast processing of backgrounding elements is typically associated with nonaesthetic, narrative or fiction emotions that are often described in terms of immersion, transportation, or absorption (see Jacobs, 2011, 2014 for different factors underlying immersion in reading narratives). Despite the long lasting debate about differences between the concepts of mood and emotion, we hypothesize that empathizing the mood described in a poem is a form of emotional involvement. Therefore, we tend to interpret successful mood induction during the reception of poetry of mood as one form of (potentially immersive) emotional involvement. Mood induction in this sense is not expected to exert a long lasting change in the present mood state of the reader, as discussed in the context of mood management through literature, music, or film (Mar et al., 2011; Zillmann, 1988). Rather, mood induction as a form of emotional involvement is similar to the narrative emotions discussed in the context of simulation processes while reading

narrative text (Jacobs, 2011; Kneepkens & Zwaan, 1995; Mar & Oatley, 2008; Oatley, 1995). More precisely, for us mood induction through poetry of mood is a form of empathy. If poetry of mood depicts the mood of a person, or the atmosphere of a location or situation, mentally simulating and resonating with the depicted state of affairs could lead to the experience of the depicted mood itself, or some feeling associated with it. Our mood empathy hypothesis is in line with classical models of language comprehension (Kintsch & Van Dijk, 1978; Zwaan & Radvansky, 1998). According to these models an important premise for language comprehension and emotional involvement is the integration of text specific information about the where, when, who, what, and why of the described state of affairs into a coherent situation model (Mar et al., 2011). Our hypothesis is also in line with approaches dealing exclusively with poetry, discussing the different usages of the depiction of a situation in classical and modern German poetry as an important feature in understanding the effects of a poem (Lamping, 1989; Meyer-Sickendiek, 2011). In all these approaches, the time course, as one critical difference between emotion and mood can be neglected, because the highlighting of a situation captures differences in the time course and allows to concentrate on the phenomenological aspects of mood abstracting from real time. We therefore propose that previous assumptions about nonaesthetic feelings also apply to mood and other related feelings.

To our knowledge, until now there are no empirical studies that explore the emergence of different kinds of feelings to poetry of mood. The present article aims to investigate how aesthetic liking and induced mood—in the sense described above—can arise from reading poetry of mood. Applying a mixed effects regression analysis, we examined whether different aspects of the interactions between reader and text could be used to predict the emergence of aesthetic liking and induced mood. For narratives, the convergence of reader and text can be described by narrative engagement (Appel et al., 2002; Busselle & Bilandzic, 2009). Existing questionnaires for assessing narrative engagement are based on the event structure of stories (Brewer & Lichtenstein, 1982) which cannot easily be identified in poetry of mood. We therefore developed a questionnaire specifically for the reception of poetry of mood aiming at assessing this special convergence of reader and poetic text (Iser, 1976; Meyer-Sickendiek, 2011). It contains the basic aspects of engagement with text, the perception of the described state of affairs, the perceived familiarity with the described state of affairs, the engagement with stylistic features and other foregrounding elements and the ease of cognitive access.[2] Based on the neurocognitive poetics model (Jacobs, 2011) we hypothesized that aspects concerning the processing of backgrounding elements should be stronger associated with empathy and induced mood, whereas aspects concerning processing of foregrounding elements should be correlated with aesthetic evaluation and liking. This last hypothesis is in line with Leder's pioneering model of aesthetic judgments and research supporting it (Kuchinke et al., 2005; Leder, Belke, Oeberst, & Augustin, 2004;

[2] We became aware of the Experiencing Questionnaire of Kuiken et al. (2012)—which is perfectly adequate for studies of poetry reception—only after finishing the present study, and thus could not include it here. Future research using this questionnaire or parts of it, with the stimulus materials used here will offer interesting comparisons.

Leder, Gerger, Dressler, & Schabmann, 2012), and with empirical research on sentence and narrative processing, which both suggest that engagement with formal or stylistic features can lead to aesthetic feelings (Bohrn et al., 2012, 2013; Miall & Kuiken, 1994, 2002).

Method

Participants

Twenty students, all native German speakers, from Free University of Berlin (12 women, eight men) with a mean age of 26.6 ($SD = 6.74$) took part in the study for course credit or financial reimbursement (EUR 8 per hour). None of them studied literature or a related discipline.

Procedure

The participants were tested one by one in a laboratory setting. They were seated in a quiet room in front of a computer monitor on which the poems and the questionnaires were presented. Before starting the reading task the measurement of different psychophysiological parameters was prepared (analyses to be reported elsewhere). To measure blood volume parameters and skin conductance, a blood volume pulse sensor and two electrodes were attached to the fingers of the left hand, which was comfortably placed next to the keyboard. Four electrodes were attached to the forehead and the cheek to measure facial muscle activation as an indicator of emotional processing. At the beginning of the session, each participant was informed about the content of the study, an analysis of readers' reactions to poetry. Our working definition of mood as something that can reflect the momentary emotional state of a person, but also the atmosphere of a location or a situation was introduced to the participant by presenting example usages of German adjectives characterizing the mood/atmosphere of a person, a situation, or a location. Before and after the reading task we used the Short Forms A and B from a German multidimensional mood questionnaire (MDBF; Steyer et al., 1997) to control for the participants' present mood state. This questionnaire assesses three dimensions of subjective feeling ("elevated vs. depressed mood," "wakefulness vs. sleepiness," "calmness vs. restlessness") on a 5-point rating scale ranging from 1 (*not at all*) to 5 (*very*). Participants used the number keys for answering. After the first mood rating they were told that they were to read a selection of six poems. The presentation of each poem started with the presentation of the title together with a mask in which each letter and punctuation mark of the poem was replaced by an asterisk. The mask provided information about the layout; that is, length and number of lines and stanzas of each poem (cf. Figure 1). By pressing the space bar participants could go through the poem verse by verse. Each key press replaced the asterisks of the next verse with the original words. Participants were instructed to press the space bar only when finished reading the actual verse. Once a line was presented, it remained on the screen so that participants were able to reread previous lines at any point in time if they wished to do so. At the end of each presentation, they were instructed to type their first impression of the content and subject matter below the poem (the poem in its entirety was still visible). The order of poems was randomized across participants.

Subsequent to the first reading of all six poems, they were presented for a second time. After the second reading of a poem a number of questions were presented below to assess the dependent variables *Induced Mood* and *Aesthetic Liking*, as well as processing-related parameters influencing these two variables. Following the second reading and the evaluation of the poems, participants were reminded of our understanding of mood/atmosphere indicating "states" of a person, a situation, or a location. The participants then rated all poems as to the extent of their depiction of the mood of a person, a location, and a situation, but this time in comparison with the other poems. The session ended with the second rating of the participants' current mood and the answering of a demographic questionnaire with additional items concerning the frequency of reading for study and leisure, and the frequency with which they read poetry. The procedure took approximately 60 min.

Material

As described above, we used pieces from German poetry of mood to investigate the emergence of aesthetic liking and emotional involvement while reading. We follow the definition of Meyer-Sickendiek (2011) describing poetry of mood independent from historical, stylistic, and formal features, and used poems from the corpus of poetry of mood analyzed in his book. The corpus comprises German poems from the 18th, 19th, and 20th century (including authors such as Hölderlin, Heym, or Becker) which meet at least three of the five indicators of poetry of mood. Because our focus was on the emergence of aesthetic liking and induced mood we aimed to choose poems which we presumed differed in this respect. Based on the critical work about German poetry which rejects mood empathy in poems characterized by alienated forms of representation (Killy, 1972; Link, 1981), we chose the level of abstraction as a varying dimension. Theories about German poetry describe abstraction as avoidance of stylistic tradition (Killy, 1972; Lamping, 1989). According to Jakobson (1960), poetry is a genre characterized by the poetic function and confronts readers with structures of similarities, regularities, and repetitions manifested in textual features and external forms of poems like metrical structure, rhyme, rhythm, or emotional coloration (Piirto, 2011). Abstraction can therefore be understood as alienation of classical forms (Schrott & Jacobs, 2011). The poems from the 19th and 20th century in the corpus of poetry of mood are most often characterized by such forms of alienation. For example, in the poem *Der Morgen* (*The Morning*, published in 1914) the poet August Stramm cast rhyme, meter, and rhythm aside. Also, the evaluation and presentation of the morning motif is not affirmatively exaggerated or illustrated like in typical poems from German Romanticism. Stramm uses often only one word per line and strings together several verbs to depict the mood (atmosphere, situation) during daybreak. To cover the whole range of poems belonging to the corpus of poetry of mood, the selected poems vary with respect to the usage of classical poetic forms from the German Romanticism and more alienated forms characterizing modern and postmodern poetry. To decouple the variations in form and style from thematic variations we followed the corpus organization into different motif groups. We first selected the two motif groups *Morning* and *Stillness*. Both are classical motifs in German Romanticism but can likewise be found in modern and postmodern

poems. We then chose six poems from each motif group varying in style and form. Table 1 depicts the title, author, publication year, and some formal information about the selected poems. Half of the participants read the six poems depicting a morning motif, the other half read the poems depicting a stillness motif.

Dependent Variables

As mentioned above, we split the emotional reactions into emotional involvement (mood empathy or induced mood) and aesthetic emotions (aesthetic liking). In the beginning of the article we argued that the notion of mood is conceptualized and discussed differently in the fields of psychology and aesthetic theory. Capturing both meanings, mood should not only be understood as a vague and intrinsically objectless feeling (cf. Siemer, 2005), but also include a phenomenological understanding of empathy as a "feeling-in" spatially extended atmospheres of places and situations (Geiger, 1911; Pinotti, 2010; Schmitz et al., 2011). Following this argument, it is perspicuous that poets employed different techniques to develop mood in poetry. To estimate the extent to which a poem induced mood, we applied the three concepts: mood, atmosphere, and situation. After the second reading of each poem participants indicated whether reading the poem led to the experience of a certain mood, and/or an atmosphere, and to what extent the poem made them reexperience a situation. To do so two 5-point rating scales ranging from 1 (*not at all*) to 5 (*very*) were used. After each rating the participants were asked to elaborate in their own words which mood(s), atmosphere(s), and situation(s) they had experienced. The rating data were used to calculate the index for induced mood. The mean intraclass correlation for all three ratings (corresponding to Cronbach's alpha) was high with $\alpha = .72$ indicating low item specific variance (Cortina, 1993).[3] We therefore used the mean of all ratings as an index of induced mood.

We understand aesthetic emotions as an important part of aesthetic evaluation and appreciation encompassing the interaction with poems. Despite the fact that aesthetic theory (Baumgarten, 1954; Burke, 1968; Kant, 1790) discusses a number of different responses like pleasure, liking, awe, or being moved to different qualities of artistic or natural objects, the most frequently used term of aesthetic virtue is *beauty* (Istok et al., 2009; Jacobsen, Buchta, Köhler, & Schröger, 2004). To capture the broad range of possible aesthetic evaluations beyond the umbrella term beauty, participants indicated on three 5-point rating scales ranging from 1 (*not at all*) to 5 (*very*) whether the poem was beautiful, fascinating, and whether they liked it. Yet, the internal consistency of the three ratings was very high (Cronbach's alpha = .89), and we therefore used the scale mean as an index of aesthetic liking.

Predictor Variables for Regression Analysis

General surface and affective features. The overview in Table 1 shows that the selected poems have a considerable variation in length and form. Therefore a straightforward way to predict induced mood and aesthetic liking is to use general surface features like length and semantic density, even though they are not specific to poetry of mood. The length of a poem can be described by the number of lines, words, and syllables. Because of the high redundancy of these parameters, we only used number of lines in the regression analysis. This corresponds to the chosen presenta-

tion technique as we presented the poems line by line in a self-paced reading paradigm. Further, we measured the proportion of content words (nouns, verbs, adjectives, and adverbs) in each poem. The proportion of content words, that is, lexical density, delivers information about the semantic content load of a sentence or text (Johansson, 2008), which influences, for example, the retention of sentences (Perfetti, 1969).

Finally, as an index of the general affective content of the present poetic material, we assessed the two dimensions emotional valence and arousal (Bradley & Lang, 2000; Russell, 1980; Wundt, 1896). One way to determine this index for an entire text is to assess the affective properties of the single words used in it (Bestgen, 1994; Jacobs, 2014; Whissell, 1994). Based on an extended version of the Berlin Affective Word List (Conrad, Schmidtke, Võ, & Jacobs, in preparation; Võ, Jacobs, & Conrad, 2006; Võ et al., 2009) we determined the valence and arousal values for almost all content words mentioned in the given poems and averaged them. However, due to the use of antiquated language in some poems, we were not able to find valence and arousal values for all content words (on average for 67.60%).

Poetry reception questionnaire. To assess the interaction between reader and poem we developed a short questionnaire inspired by the reading experience and narrative engagement scales, respectively (Appel et al., 2002; Busselle & Bilandzic, 2009). The questionnaire included 12 items (cf. Table 2) depicting the perception of mood in a poem, the perception of the description of a situation, the perceived familiarity with the described state of affairs, aspects of cognitive comprehension, and the perception and evaluation of stylistic features like the perceived matching of form and content. All items were formulated as statements. The participant indicated on a 5-point rating scale ranging from 1 (*not at all*) to 5 (*very*) whether the content of each statement matched the poem. We presented them together with each poem in a random order. Supplementary to the ratings the subjects had to write down in their own words, which mood(s), atmosphere(s), and situation(s) were described in the poems. The factorial design of the questionnaire was analyzed with a principal component analysis. The Kaiser-Meyer-Olkin measure (KMO = .76, for individual items KMO > .58) verified the adequacy of the sample size comprised of the six ratings of each of the 20 participants. After a visual exploration of the scree plot, we specified the number of factors to be extracted to five and used varimax rotation to maximize differences between factors. The five extracted factors accounted for 77.9% of the total variance with acceptable eigenvalues (Jolliffe, 1986). Table 2 shows these indicators for each factor as well as the factor loadings after rotation. Four items capturing aspects of reading fluency as well as perceived matching of form and content were related to Factor 1 (*Style*), two items accounting for the familiarity with the described state of affairs were related to Factor 2 (*Familiarity*), two items reflecting ease of cognitive access were related to Factor 3 (*Comprehensibility*), and two items accounting for the described mood were related to Factor 4 (*Described Mood*). Only one item was related to Factor 5 (*Described Situation*). Although factors with fewer than two items are seen as weak and unstable, we decided to retain this factor. The solution containing only four factors suggested an additional factor that

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[3] Each participant rated six poems yielding $20 \times 6 = 120$ data points.

Table 1
All Used Poems and Their General Surface Features

Motif	Poem writer: Title	Publication date	Number of lines	Number of stanza	Number of columns[a]	Number of words	Semantic density	Mean valence[b]	Mean arousal[c]
Morning	Friedrich Hölderlin: Des Morgens	1799	20	5	1	130	50.00	1.28	2.59
	Eduard Mörike: An einem Wintermorgen, vor Sonnenaufgang	1825	39	6	2	271	49.82	1.34	2.57
	August Stramm: Der Morgen	1914	26	1	1	64	84.38	0.30	2.67
	Jakob van Hoddis: Morgens	1914	18	1	1	107	66.36	1.38	2.87
	Durs Grünbein: Grauzone Morgens	1988	17	5	1	75	40.00	0.51	2.51
	Friederike Mayröcker: Junimorgen am offenen Fenster	1989	14	1	1	82	56.10	1.07	2.57
	Mean (*SD*)		22.33 (9.09)	3.17 (2.40)		121.50 (77.02)	57.77 (15.64)	0.59 (0.32)	2.63 (0.13)
Stillness	Ludwig Tieck: Im Windsgeräusch, in stiller Nacht	1796	24	2	1	123	47.15	1.15	2.60
	Theodor Storm: Abseits	1847	24	4	1	119	54.62	0.63	2.64
	Georg Heym: Wo eben rauschten noch die Karusselle	1890	12	3	1	84	54.76	0.63	2.58
	Harald Hartung: Die letzten Gäste	1975	24	6	1	60	51.11	0.57	2.51
	Friederike Mayröcker: Opfer des Frühlings	1981	24	1	1	90	55.81	0.39	2.37
	Jürgen Becker: Mittags-Geräusch	1990	16	1	1	86	48.33	1.20	2.75
	Mean (*SD*)		20.67 (5.32)	2.83 (1.94)		93.67 (23.67)	51.97 (3.65)	0.51 (0.11)	2.58 (0.13)
Total mean (*SD*)			20.42 (6.45)	3.42 (2.12)		105.50 (42.72)	54.87 (11.25)	0.55 (0.23)	2.60 (0.12)

[a] In order to present each poem on one page, long poems were divided on two columns.
[b] The rating scale for valence range from −3 (negative) to 3 (positive).
[c] The rating scale for arousal ranged from 0 (*not at all*) to 9 (*very strong*).

Table 2

Summary of the Principal Component Analysis Results for the 12 Items of the Poetry Reception Questionnaire

	Rotated factor loadings				
	Style	*Familiarity*	*Comprehensibility*	*Described Mood*	*Described Situation*
Eigenvalue	4.24	1.79	1.29	1.07	0.96
Percentage of explained variance	35.36	14.88	10.76	8.91	7.97
This poem has rhythm.	**.78**	.06	.26	.08	−.16
In this poem form and content go together.	**.77**	.06	.03	.01	.18
This is a well-composed poem.	**.77**	.18	.22	.18	.12
This poem can be read fluently.	**.52**	.24	.44	−.09	−.43
This poem describes a well-known experience.	.12	**.93**	.10	.16	.01
In this poem a familiar phenomenon is depicted.	.14	**.92**	.09	.20	.13
I was not sure I understood everything while reading.*	.14	.01	**.85**	.16	.13
The meaning of this poem is obscure.*	.24	.15	**.84**	−.06	.05
This poem describes an atmosphere.	−.02	.13	.14	**.87**	.08
This poem describes a mood.	.21	.21	−.05	**.84**	−.03
This poem describes a situation.	.06	.10	.12	.00	**.89**
I had an idea of what the poem is about while reading it.	.36	.37	.44	.19	.47
Cronbach's alpha	.77	.93	.77	.72	—

Note. Ratings for statements marked with * were recoded so that low numbers indicate difficulty in comprehending and high numbers ease of comprehension. Factor loadings over .50 appear in bold.

should be explored, because of several cross loadings and some item commonalities below .50 (Costello & Osborne, 2005). In the five factor solution, all item commonalities were above .63. Moreover, cross loadings were reduced. Eleven items loaded strongly on one factor (cf. Table 2). Only one item crossloaded on four of five factors. For the four subscales of the poetry reception questionnaire containing more than one item, Cronbach's alpha was adequate ranging from .72 to .93. In order to explore the dependencies of *Induced Mood* and *Aesthetic Liking* we used the factor scores as predictors in LMM analysis. The factor scores were obtained with the regression method allowing for correlations between factor scores.

Analysis of the qualitative data. To further explore the dependent variable *Induced Mood* we analyzed the open answers concerning moods described in a poem and moods felt during reading. Compared with the other open questions, the drop out of the open answers for these two questions (7.50% of the cases) was acceptable. The correspondence of the free descriptions of described mood and felt mood were rated by two independent raters using a 5-point rating scale ranging from 1 (*no similarity*) to 5 (*totally congruent*). The interrater reliability was very high (Cronbach's alpha = .90). To calculate the mean similarity index both ratings were averaged. The mean similarity between answers about described mood and induced mood was 3.31 (*SD* = 1.31), indicating a higher similarity than dissimilarity. There were no substantial relationships between the five factors of the poetry reception questionnaire and the similarity index (all $r < .12$, $p > .23$).

Statistical Analysis

To identify the best predicting variables for *Induced Mood* and *Aesthetic Liking*, we used mixed effects regression analyses with Restricted Maximum Likelihood (Baayen, 2008) performed in the R environment for statistical computing (R Development Core Team, 2011) using the lmer function from the lme4-library of

Bates, Maechler, and Bolker (2011). Linear mixed models (LMM) account for the fact that in our study both subjects and poems represent samples of larger populations. We therefore used intercepts for subjects and poems as random effects in all LMMs. For the sake of conciseness, only significant tests associated with the fixed effects are reported, as these are directly relevant to our hypotheses. To test whether *Induced Mood* and *Aesthetic Liking* could be differentiated by different regression models, we used a stepwise procedure. To check for possible confounds we first analyzed the predictive power of the general surface and affective features of the poems, number of lines, semantic density and emotion potential (represented by the two variables *Mean Valence* and *Mean Arousal*). We entered these four z-standardized variables as fixed effects into the LMM predicting *Induced Mood* and *Aesthetic Liking*, respectively. To evaluate the resulting models, they were computed again with the lmer function, but using Maximum Likelihood and compared with null models comprising only the two random effects (Barr, Levy, Scheepers, & Tily, 2013). For the model comparisons, the R-function ANOVA (Crawley, 2007) applying a chi-square test was used. However, there were no effects for the four general surface and affective variables, neither for the regression model predicting *Induced Mood*, nor for the model predicting *Aesthetic Liking*. Moreover, both regression models did not differ significantly from the null model only including the random factors (for *Induced Mood*: $\chi^2(4) = 4.81$, $p = .31$; for *Aesthetic Liking*: $\chi^2(4) = 6.48$, $p = .18$). We therefore eliminated the predictors related to the general surface and affective features in all further models.

In a second step we analyzed the predictive power of the five factors, which were extracted from the poetry reception questionnaire. We entered the extracted factor scores (without interaction terms) as fixed effects into the LMM predicting *Induced Mood* and *Aesthetic Liking*, respectively. To interpret the importance of the single predictor variables we evaluated the *t* values. Please note that the lmer function does not report

degrees of freedom for the *t* values of the LMM analysis, because it is still unclear how these should be derived. Thus, to evaluate the estimated coefficients for the predictor variables *p* values were examined using posterior distributions for model parameters obtained by Markov chain Monte Carlo (MCSMC) sampling. This procedure also estimates the 95% posterior density intervals for each predictor (Baayen, 2008; Baayen, Davidson, & Bates, 2008).

Results

Mood Check Before and After Reading Task

Before the reading task, the participants reported being in a positive mood ($M = 4.24$) with average arousal ($M = 3.65$) and wakefulness levels ($M = 3.23$). To test whether reading the poems influenced the momentary mood, we conducted *t* tests comparing the individual ratings before and after the reading task (means and standard deviations are summarized in Table 3). We observed a slight but nonsignificant decrease, $t(19) = 1.75$, $p = .96$ for the well-being dimension. No changes were observed for the dimensions arousal and wakefulness (both $t(19) < 1$). Reading the poems did not induce longer lasting changes measurable with the global dimensions assessed by the MDBF mood questionnaire.

Linear Mixed Model Analysis Predicting Induced Mood and Aesthetic Liking

The extracted factor scores from the poetry reception questionnaire representing the factors *Familiarity*, *Style*, *Comprehensibility*, *Described Mood*, and *Described Situation* were used as fixed effects in the LMMs predicting *Induced Mood* and *Aesthetic Liking*. Table 4 presents the estimates, the *t* values, the standard errors, and the Markov chain Monte Carlo (MCMC)-estimated *p* values for the fixed effects as well as the likelihood-ratio based chi-square statistics for the model comparisons with the null models only including the random effects subject and poem. The inclusion of these five factors in the model predicting *Induced Mood* led to a significant increase in goodness of fit compared to the null model, $\chi^2(5) = 134.46$, $p < .0001$. The estimated coefficients denoted a positive relationship between all predictor variables and the amount of induced mood. The observed estimates for all predictor variables reached significance. The strongest predictor variables for *Induced Mood* were *Familiarity* and *Described*

Mood. Here the estimated coefficients exceed the value of the estimates from the other predictor variables around one third. The third strongest predictor variable was *Described Situation*, followed by *Style,* and *Comprehensibility*. The amount of induced mood depends strongest on the familiarity of the depicted state of affairs and the description of mood/atmosphere. The clear description of a situation, a high engagement with style and a good comprehensibility also led to an increase in induced mood, but to a lesser extent than familiarity and the description of mood/atmosphere.

The inclusion of the five predictor variables in the LMM predicting *Aesthetic Liking* also led to a significant increase in goodness of fit compared with the null model, $\chi^2(5) = 95.52$, $p < .0001$. We observed significant positive estimates for all five predictors. But contrary to the mixed model predicting *Induced Mood*, the strongest predictor for *Aesthetic Liking* was *Style*. The estimate for this predictor variable was almost twice as large as the estimates for the other predicting variables. The prediction values of *Familiarity* and *Described Mood* for *Aesthetic Liking* were clearly weaker than for *Induced Mood*. Aesthetic liking was highest for poems rated as well crafted and easy to read. The description of mood/atmosphere, the clear description of a situation, the familiarity of the described state of affairs, and a good comprehensibility also led to an increase in aesthetic liking, but to a lesser extent than *Style*.

Taken together, although *Aesthetic Liking* and *Induced Mood* are correlated ($r = .64, p < .0001$) the mixed models predicting these two variables differ. For better comparison we plotted the mean estimates for the five predictors across the MCMC samples for both models together with the 95% posterior density intervals (see Figure 2). The confidence intervals for the factor *Style*, which seems to be a strong predictor for *Aesthetic Liking*, but not for *Induced Mood*, do not overlap. The same holds for the predictors *Described Mood* and *Familiarity*, which are strong for *Induced Mood*, but not for *Aesthetic Liking*. Just as well, the confidence intervals for these two factors show no or negligible overlapping. Especially the differences for the factors *Style* and *Familiarity*, the ones with the largest eigenvalues in the principal component analysis, are in line with the neurocognitive poetics model of literary reading (Jacobs, 2011). They support the models' assumption about a close relationship between processing of familiar backgrounding elements and emotional involvement (e.g., induced mood) on the one side, and processing of foregrounding elements and aesthetic emotions on the other side.

Moreover, we observed a small but positive relationship between *Induced Mood* and the similarity index ($r = .21, p = .03$) comparing the written answers about described and induced moods. No such relationship could be observed between the similarity index and *Aesthetic Liking* ($r = .18, p = .06$). These positive effects underline the supposed link between the described state of affairs and the amount of induced mood.

In order to verify the reported differentiation between induced mood and aesthetic liking, we conducted a further analysis. *Familiarity* but not *Style* was observed as the strongest predictor for *Induced Mood*. Therefore, only *Familiarity* but not *Style* should be correlated with aspects of mood. We thus conducted more LMMs to test this assumption. After the reading and evaluation of all six poems the participants had to indicate which kind of mood was presented in each poem. These ratings were used to predict *Familiarity* and *Style* using the same procedure as described above.

Table 3
Participants' Present Mood Before and After the Reading Task

	Present mood			
	Before		After	
	Mean	SD	Mean	SD
Well-being (Emotional valence)	4.24	0.52	3.96	0.53
Arousal	3.65	0.89	3.64	0.87
Wakefulness	3.23	0.72	3.26	0.67

Note. Present mood was access with the German MDBF (Steyer et al., 1997) using 5-point rating scales.

Table 4
Linear Mixed Models Estimates of Fixed Effects for Induced Mood and Aesthetic Liking

	Predicted variable					
	Induced Mood			*Aesthetic Liking*		
	Estimate	Standard error	*t* value	Estimate	Standard error	*t* value
(Intercept)	3.33	0.054	61.42***	3.29	0.066	49.59***
Style	0.27	0.050	5.34***	0.57	0.061	9.32***
Familiarity	0.46	0.051	9.07***	0.28	0.061	4.58***
Comprehensibility	0.21	0.050	4.21***	0.21	0.060	3.42***
Described Mood	0.46	0.051	9.02***	0.17	0.062	2.80**
Described Situation	0.32	0.050	6.43***	0.23	0.061	3.71***
Contrast with . . .	χ^2 (*df*)		*p* value	χ^2 (*df*)		*p* value
Null model	134.46 (5)		<.0001****	95.52 (5)		<.0001****

Note. For the fixed effects Markov chain Monte Carlo-estimated *p* values were calculated with the R package language (Baayen, 2008; Baayen et al., 2008). Following code is used to inform about *p* values.
* $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

We included the three z-standardized predictor variables: *Mood of a Person*, *Mood of a Situation,* and *Mood of a Location* as fixed effects in two LMMs predicting *Familiarity* and *Style*, respectively. Subject and poem were included as random effects. To evaluate the LMMs we compared them with the corresponding null model only including the two random effects and calculated MCMC-estimated *p* values for all fixed effects. The estimates of the LMMs predicting *Familiarity* and *Style* are depicted in Table 5. Figure 3 shows the mean estimates across the MCMC samples for both models together with the 95% posterior density intervals.

The results of the evaluation indicated that only *Familiarity* could be predicted by mood-related variables. The inclusion of the three predicting variables *Mood of a Person*, *Mood of a Situation,* and *Mood of a Location* lead to a significant increase in goodness of fit

compared with the null model only containing the random effects, $\chi^2(2) = 9.75$, $p = .02$. No such increase in goodness of fit was observed for the LMM predicting *Style*, $\chi^2(3) = 3.34$, $p = .34$. The LMM predicting *Familiarity* contains only one significant predictor. When a poem strongly described a mood of a situation its depicted state of affairs was estimated as familiar. This is well in line with text comprehension theories assuming that the representation of the depicted state of affairs is a central point in comprehension. It is also in line with the assumption that the mental simulation of the social world described in a piece of text is a basic mechanism for emotional involvement like empathy and identification (Oatley, 1999). Nevertheless, the overlapping confidence intervals for all three factors suggest that the differences in predicting *Familiarity* and *Style* are less clear than those in predicting *Induced Mood* and *Aesthetic Liking*.
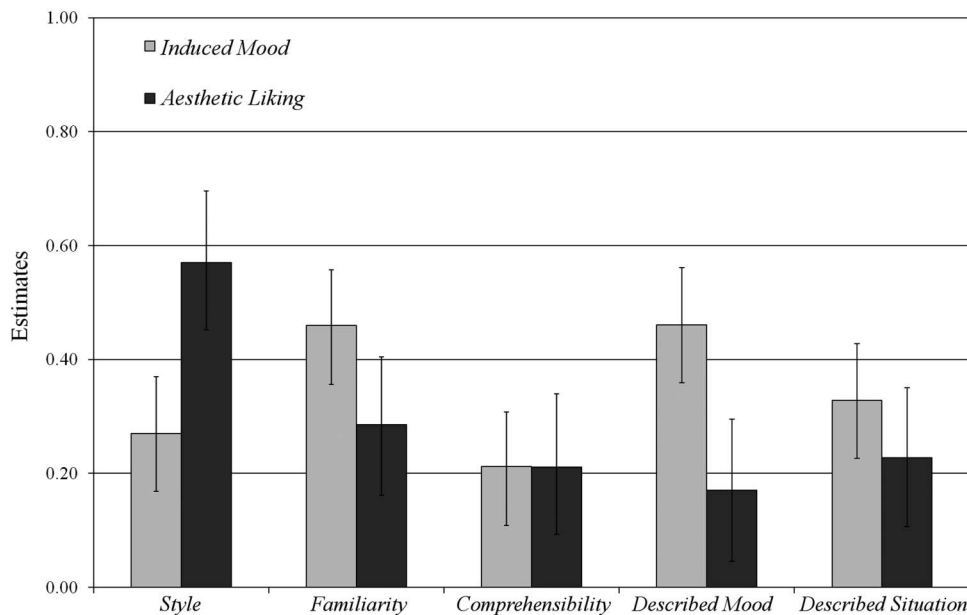

Figure 2. Mean estimates of fixed effects predicting *Induced Mood* and *Aesthetic Liking* across Markov chain Monte Carlo samples and Bayesian highest posterior density confidence intervals (error bars).

Table 5
Linear Mixed Models Estimates of Fixed Effects for Familiarity and Style

	Predicted variable					
	Familiarity			Style		
	Estimate	Standard error	t value	Estimate	Standard error	t value
(Intercept)	0.00	0.161	0.00	0.00	0.134	0.00
Mood of a Person	−0.01	0.085	−0.11	0.03	0.094	0.33
Mood of a Location	0.11	0.087	1.26	−0.10	0.095	−1.01
Mood of a Situation	0.23	0.082	2.75**	0.07	0.091	0.78
Contrast with . . .	χ^2 (df)		p value	χ^2 (df)		p value
Null model	9.75(3)		.02*	3.34(3)		.34

Note. For the fixed effects Markov chain Monte Carlo-estimated *p* values were calculated with the R package language (Baayen, 2008; Baayen et al., 2008). Following code is used to inform about *p* values.
* $p < .05$. ** $p < .01$. *** $p < .001$. **** $p < .0001$.

Discussion and Conclusion

Our results fit well with the mood empathy hypothesis and the basic assumption of the model postulating different relationships between the processing of backgrounding and foregrounding elements and emotional involvement and aesthetic evaluation at all three levels of analysis, that is, the neuronal, cognitive-affective (experiential), and behavioral (Jacobs, 2011, 2014). Here we only provide evidence at the experiential and behavioral levels, but these data will serve to constrain future studies using neuroimaging techniques. Our data suggest that similarly to the comprehension of narratives, the reading and comprehension of poems lead to the emergence of aesthetic as well as nonaesthetic emotional responses, which can be understood as a function of the reader's interaction with the *backgrounding* and *foregrounding* features of the text.

The results also indicate that general surface and affective features of a piece of literature alone are not enough to understand and explain emotional involvement and aesthetic appreciation. This is in line with assumptions of the reception–aesthetic theory (Iser, 1976) or Reader–Response Criticism Theory (Tompkins, 1980), which state that full comprehension of a text goes beyond literal understanding and cold information processing (Jacobs, 2011, 2014; Kuiken et al., 2012; Miall & Kuiken, 1994). Only the interaction between reader and text brings a poem to life, an idea that is operationalized in the neurocognitive poetics model.

Concerning backgrounding effects at the cognitive-affective level, the model's fast route is hypothesized to facilitate immersive processes through activation of familiar situation-models, and the experiencing of nonaesthetic emotions, such as empathy. In line with our mood empathy hypothesis, here we follow Oatley's
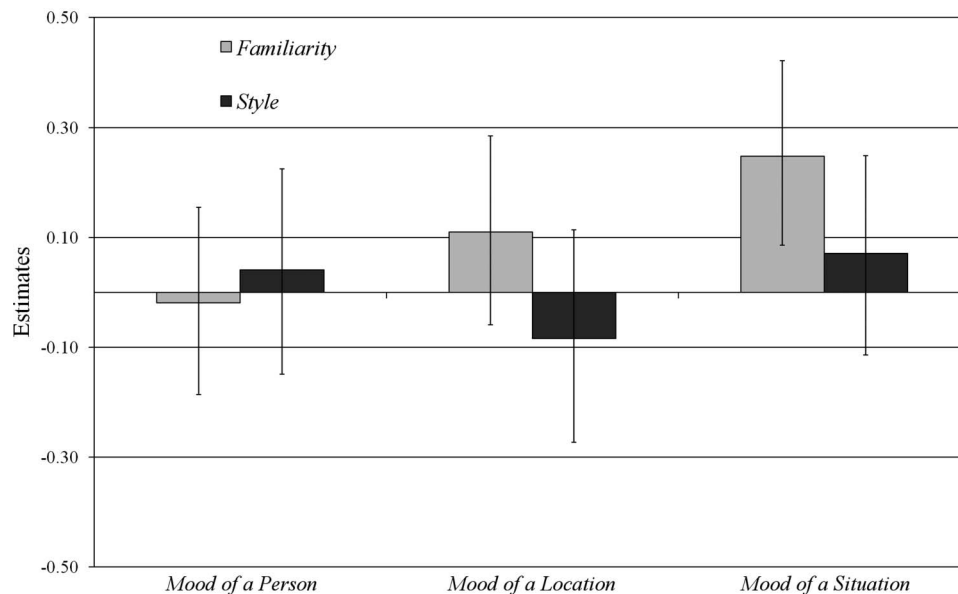

Figure 3. Mean estimates of fixed effects predicting *Familiarity* and *Style* across Markov chain Monte Carlo samples and Bayesian highest posterior density confidence intervals (error bars).

(1995, 1999, or Kuiken, Campbell, and Sopčák's (2012) notions in interpreting our data as showing that, in the *Morning* and *Stillness* poems selected for this study, backgrounding elements like the situational embedding activated familiar scripts in the readers' minds. The associated mental simulation processes resulted in mood induction, which is one form of emotional involvement. The analysis of the open answers shows that the moods induced by the poems resemble the moods described in the poems. This highlights their empathetic nature and endorses the comparability between induced mood and nonaesthetic emotions described for reading narratives (Oatley, 1995, 1999).

The factor *Familiarity,* which could be predicted from the processing of situational aspects, was the best predictor for *Induced Mood*. The more specific a poem describes a situation or atmosphere, the better should readers be able to simulate the depicted state of affairs, attune to the situation (cf. Kuiken et al., 2012), and sense the corresponding mood. The scenario approach to emotion induction also fits with our interpretation that situational embedding is a main factor mediating mood empathy and thus mood induction. In this approach the best way to instruct actors to express a specific emotion is providing them with situation vignettes or short scenarios describing an emotion-eliciting situation (Scherer, Banse, & Wallbott, 2001).

Concerning foregrounding effects at the cognitive-affective level, the model's slow route is assumed to be operational in aesthetic processes supported by explicit schema adaptation, artifact emotions, and the ancient neuronal play, seek, and lust systems. In line with this view shared by many researchers (e.g., Bohrn et al., 2013; Cupchik et al., 1998; Leder et al., 2004, 2012; Miall & Kuiken, 1994; Obermeier et al., 2013; van Peer, 1990) we thus interpret the data as showing that, for poetry as well as narratives, the processing of foregrounding elements is related to aesthetic feelings. The observation that the factor *Style* was the best predictor of *Aesthetic Liking* is in accord with both theoretical and empirical studies on art appreciation (Leder et al., 2004, 2012), including those indicating that processing fluency—which is known to be modulated through the use of stylistic devices that regulate cognitive processing demand—influences aesthetic judgments (e.g., Kuchinke et al., 2005; Kunst-Wilson & Zajonc, 1980; Leder et al., 2004, 2012; Reber, Schwarz, & Winkielman, 2004). However, the design of the present study does not allow us to draw any conclusions regarding the processes underlying the relations between style and aesthetic liking. Nevertheless, our present usage of poems characterized by classical poetic forms of parallelism on the one hand and poems characterized by alienated forms of abstraction on the other hand suggests that a focus on stylistic forms alone does not allow to fully understand aesthetic emotional responses to poetry. It also suggests that neither the ease of cognitive processing associated with rhyme or meter (e.g., Obermeier et al., 2013), nor the prolonged processing associated with other forms of defamilarization and abstraction (e.g., van Peer, 1986) are sufficient to explain aesthetic judgments. Both forms of foregrounding can contribute to the elicitation of feelings of beauty and aesthetic liking (and to other effects described in van Peer et al., 2007), but ultimately aesthetic judgments are the result of a complex dynamics between back- and foregrounding elements of the text and context factors like reader-related variables, such as motivation, skill, or taste. The model of neurocognitive poetics specifies such complex interactions including subtle processes like

concernedness or self-reflection (Iser, 1976; Jacobs, 2011, 2013; Kuiken et al., 2012; Miall & Kuiken, 1994; Tompkins, 1980), but so far it remains primarily a heuristic tool for generating and guiding research, and much more data will have to be collected to give it both explanatory and predictive power.

In conclusion, we would like to propose that viewing mood induction through poetry of mood as a form of empathy offers a fresh, yet historically well-rooted perspective for future studies on literary reading and poetics. In line with the mood empathy hypothesis, our study suggests that if a poem (whether it belongs to the category of "poetry of mood" or not) depicts the mood of a person, or the atmosphere of a location or situation, mentally simulating and resonating with the depicted state of affairs can lead to the experience of the depicted mood itself, or a similar feeling associated with it. Our results also allow for the assumption that situation embedding is an important feature for mood empathy and mood induction during the reading of poetry. To fully understand the processes associated with mood empathy and mood induction, an extension of the definition of the term mood appears necessary. Mood is claimed to differ from emotion according to the temporal dynamics and the unspecificity of intentionality and cause (Beedie et al., 2005). However, moods are also often experienced in specific situations. Focusing on such situational aspects, either in terms of phenomenological atmospheres (Schmitz et al., 2011) or in terms of situation-based cognitive appraisal mechanisms, can provide new perspectives for the understanding of affective and aesthetic processes in literary reading and associated fields of research (e.g., film studies, media psychology).

The role of affective and aesthetic processes in reading poems has to be further examined, of course. Our study presents a first step trying to combine assumptions from poetic theory, (neuro-)cognitive poetics, and new phenomenology with hypotheses from cognitive psychology and psycholinguistics. Apart from complementing and cross-validating rating data with peripheral-physiological and neurocognitive data, further studies could continue the discussion on theoretical approaches to poetry reception which propose an antithetic relationship between induced mood and level of abstraction (e.g., Worringer, 1953). Finally, if it were possible to more accurately specify or quantify the amount of abstraction and alienation in poetry of mood, it should also be possible to explore how stylistic features indicating alienation help or hinder the processes of mood empathy and/or aesthetic liking.

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