

On Being Moved by Art: How Reading Fiction Transforms the Self

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An experiment tested the hypothesis that art can cause significant changes in the experience of one's own personality traits under laboratory conditions. After completing a set of questionnaires, including the Big-Five Inventory (BFI) and an emotion checklist, the experimental group read the short story *The Lady With the Toy Dog* by Chekhov, while the control group read a comparison text that had the same content as the story, but was documentary in form. The comparison text was controlled for length, readability, complexity, and interest level. Participants then completed again the BFI and emotion checklist, randomly placed within a larger set of questionnaires. The results show the experimental group experienced significantly greater change in self-reported experience of personality traits than the control group, and that emotion change mediated the effect of art on traits. Further consideration should be given to the role of art in the facilitation of processes of personality growth and maturation.

The discussion of art and personality in psychological literature often takes one of the following forms: investigation of what constitutes artistic personality (Feist, 1998, 1999; Gridley, 2006; Kogan, 2002; Roy, 1996), whether and in what way artistic personality is linked to mental illness (Andreasen, 1987; Jamison, 1994; Nettle, 2006), how artists' personalities affect their aesthetic styles (Dudek & Marchand, 1983; Loomis & Saltz, 1984), and how aesthetic judgments are shaped by judges' personalities (Machotka, 2006). Less frequent are examinations of what traits in the general population are related to appreciation of particular artistic styles (Feist & Brady, 2004), what similarities obtain between theories of personality and theories of art (Duke, 2002), and whether personality can be considered a work of art in itself (Pérez-Álvarez & García-Montes, 2004). What is missing is an examination of the impact of art on the personalities of those who appreciate it. This is not surprising. Although many

art lovers feel personally transformed as a consequence of an interaction with what they find to be moving works of art, this change seems rare, unpredictable, unique, and difficult to measure. Such experiences tend to be dismissed as anecdotal.

Yet interest persists in the transformative potential of art on its consumers. Sabine and Sabine (1983), who interviewed 1,382 readers around the United States as a part of the "Books That Made the Difference" project, found that for avid readers, books were powerful instigators of self-change. In a more formal setting that alleviated some of the self-selection issues of Sabine and Sabine's (1983) work, Ross (1999) found that among her sample of 194 committed readers, 60% found reading to be a personally transforming experience. It appears that many individuals found the books they read had literally changed them. The vagueness of what respondents in these studies meant by *transformative* does not preclude a systematic study of whether their intimation—that the art to which they were exposed transformed them—could be accurate.

Two questions arise. Firstly, can stable ways of relating to oneself and others (i.e., personality) be changed? After all, personality, by definition, includes stable ways of interacting with oneself and one's environment (Burger, 2007). Earlier theories suggest that traits are fully developed by the age of 30, and stable thereafter

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(Costa & McCrae, 1994; McCrae & Costa, 1990, 1996). These theories have, however, been revised, in response to research showing that the mean levels of personality traits change well into middle adulthood (McCrae et al., 1999, 2000; Roberts, Walton, & Viechtbauer, 2006; Sristava, John, Gosling, & Potter, 2003). The 'set-like plaster' model of personality traits (Costa & McCrae, 1994) appears no longer to hold. It is, therefore, possible that, at least for some participants in Sabine and Sabine's (1983) and Ross's (1999) studies, the subjective experience of change could have marked genuine transformation of their personalities.

Second, what theoretical frameworks would support the suggestion that art might facilitate such a process of personality maturation? From the cognitive science perspective, it does seem possible that art could indeed cause changes in the experience of one's own self. The schematic constructions of others that are used in everyday life are the same as those used when understanding a piece of fictional literature (Gerrig, 1998). Reading fictional narratives has been found to involve processes of identification and self-implication (Kuiken, Miall, & Sikora, 2004) and to modify the self (Miall & Kuiken, 2002). Furthermore, literature can be conceptualized as a cognitive and emotional simulation, in which the travails of characters are literally run on our minds, as a computer simulation runs on a computer (Oatley, 1999). It would not be surprising if the result of this simulation, then, is cognitive and emotional re-schematization of categories, including those relating to oneself.

Also explored is the possibility that the process of change described here is mediated by changes in emotion. What may be moving about art likely includes moving emotions (Oatley, 2003). Averill (2005) argued that emotions are both mediators and products of creative works. Langer (1953) took the relationship between art and emotion even further and asserted that art represents forms symbolizing dynamic transformation of human emotions. It seems reasonable to assume, then, that changes in emotions may, at least for some individuals, lead the way toward more permanent changes in personality structure.

In this article, the facilitating effect of art on personality was examined in a controlled laboratory experiment. Bringing this process into laboratory, despite the benefits of isolating causal relationship between the variables, has its limitations.

Personality change is a complex, gradual, uniquely individual process. Respondents in the Sabine and Sabine's (1983) and in Ross's (1999) work were explicit in explaining how books that transformed them were uniquely suited to their individual preoccupations, artistic tastes, and particular life stages. Rather than aiming to produce such profound effect in our laboratory, a sensitive dependent variable was created to register

small (but possibly significant) shifts in participants' experience (perception) of their own traits following a short story (art condition) or a control story with the same content, but documentary in form (control condition). The only difference between the stories was the presence (or absence) of artistic (literary) form. The hypothesis tested here is that even in laboratory conditions, exposure to an artistically recognized short story would cause significantly greater changes in one's self-reported traits (even if temporary) than exposure to the documentary story of the same content. The potential mediational role of emotion in this process was tested as well.

METHOD

Participants

One hundred and sixty-six first-year undergraduates (112 women and 54 men, mean age = 19.5 years) from a large urban university participated in the experiment. All were fluent in English. Participants were treated in accordance with the Canadian Psychological Association's (and the American Psychological Association's) ethical standards with regard to treatment of human participants. They were awarded course credit for their participation.

Procedure

After the initial introduction, participants were ushered into a room and left in front of a 15-inch (38.1 cm) color monitor attached to an IBM-compatible computer. A computer program guided them through the entire experiment. At Time 1 they answered questions on a series of questionnaires, among which were the Big-Five Inventory (John, Donahue, & Kentle, 1991) and an Emotions Checklist (see below). Following the questionnaires, participants were randomly assigned to one of the two groups. The experimental group read the short story *The Lady With the Toy Dog* by Anton Chekhov (1860–1904), and the control group read a comparison text that had the same content as the story, but was documentary in form (see below). After this phase, at Time 2, participants completed a manipulation check, and again received a questionnaire set including the Big-Five Inventory and Emotions Checklist. Finally, participants were fully debriefed. The computer was programmed to randomize the presentation of questionnaires, as well as the order of items within the questionnaires. The large number (and randomization) of questionnaires diminished the variability due to respondents' purposeful manipulation of their answers due to response style (either to be similar, or different from what they had answered previously).

Instruments

Texts.

1. **Short story.** In the experimental condition, participants were required to read a short-story by Anton Chekhov entitled *The Lady With the Toy Dog*. The story was originally published in 1899 and was translated from Russian into English by S. S. Koteliansky and Gilbert Cannan. The story is 6,367 words long and has the Flesch-Kincaid Grade Level score of 6.7. This score is a readability statistic, and the formula for its calculation is $(.39 \times \text{ASL}) + (11.8 \times \text{ASW}) - 15.59$, where ASL is average sentence length (the number of words divided by the number of sentences), and ASW is average number of syllables per word (the number of syllables divided by the number of words). This story is among the five most highly regarded Chekhov's stories (Llewellyn-Smith, 1973), and Chekhov himself is known to be among the best short-story writers in the history of literature. The story's artistic merit is thus difficult to dispute. None of our participants had previously read the story. It was therefore possible to measure the direct effect of the story, without worrying about potentially confounding previous readings.
2. **Comparison text.** Because the hypothesis of interest was to test the impact of the literary form of the text on the self-reported trait change, a version of the short story was constructed that changed nothing but its formal artistic properties. The content of the short story deals with an adulterous love affair between two married people, so a court document meant to represent an ostensible divorce proceeding was constructed, and within it the main protagonists of the story re-tell the events of their involvement with each other in court. Thus, it was possible to include all events of the story in a documentary way, rather than in Chekhov's fictional mode. The control text was controlled for length (6,358 words) and readability (Flesch-Kincaid Grade Level score 6.7).

Questionnaire Measures

1. **The Big Five Inventory** (John et al., 1991) is a 44-item scale measuring the Big-Five dimensions of personality—extraversion, conscientiousness, agreeableness, emotional stability/neuroticism, and openness. It uses short descriptive phrases prototypical of each of the Big Five dimensions (John & Srivastava, 1999). In these items,

individuals are asked whether they see themselves as someone who, for example, “is talkative,” or “tends to find fault with others,” and the responses are scored on 5-item Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). John et al. (1991) reported test–retest correlations (based on 6-week interval) between .65 and .83.

2. **Emotion checklist.** An emotion checklist contained 10 emotions: sadness, anxiety, happiness, boredom, anger, fearfulness, contentment, excitement, unsettledness, and awe. Participants were required to indicate, on an 11-point scale (0 = *The least intensity I've ever experienced*, 10 = *The most intensity I've ever experienced*), how much they feel each emotion at that moment.
3. **Manipulation check.** Following the reading of the text, the participants were asked to complete a checklist that included adjectives *artistic* and *interesting* to evaluate, on Likert scales from 0 to 5 (0 = *Not at all*, 5 = *Extremely*), to what extent each of the adjectives could be applied to the text they have read. This was used to check whether participants found the short story, indeed, more artistic than the control text. Unless the experimental condition was perceived as more artistic, no claims could be made with regards to impact of art versus control condition. Similarly, unless participants found both stories equally interesting, any effect that would be found could be seen as driven by the interest level, rather than by the experimental manipulation.

Dependent Measures

The hypothesis tested here was a general one—that exposure to the experimental condition would create significantly greater change in traits than the control condition, and the change that each individual might experience could be in any trait and in any direction. An index of personality change was created that included change on all five traits, and followed a similar procedure for an index of emotion change (see Results). This also prevented potentially inflating *p*-values to an exaggerated degree due to a large number of traits being tested. An added benefit was the increased sensitivity of the measure. Because the text was not chosen to alter any particular trait in any particular direction, and because, due to individual differences, we had no way of knowing which traits would be affected for which individuals, creating a composite index made it possible to detect changes in the entire personality profile that might, otherwise, be lost in the overall variability of individual responses. The change in emotions was assessed as well, to check its potential mediating function.

RESULTS

The means and standard deviations of *emotion change* and *trait change* were .73 (.30) and .77 (.32), respectively, and the correlation between the two dependent variables was statistically significant ($r = .24, p < .01$). To check whether our experimental manipulation was experienced as more artistic than the control, a *t*-test was run, which showed that participants found the short story more artistic than the comparison text ($M_{art} = 2.86$ vs. $M_{control} = 2.15$), $t(164) = -4.29, p < .001$. There was, however, no significant difference between experimental and control texts in how interesting participants found them, $t(164) = -.50, p > .05$.

Trait Change

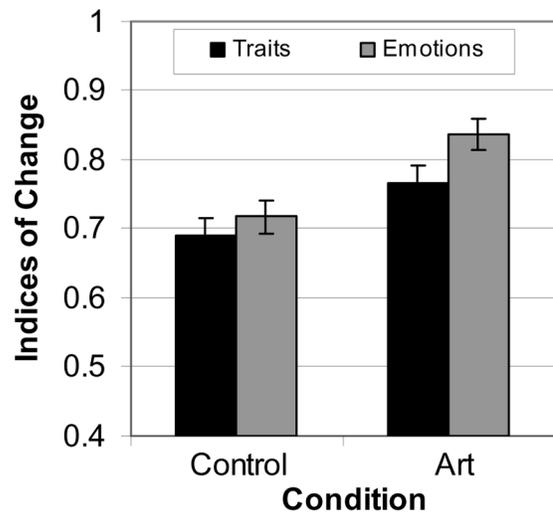
Scores for the five traits at Time 2 (assessed with the Big-Five Inventory) were regressed on scores for the five traits at Time 1, and absolute values of standardized residuals were summed over the five traits. Absolute values were used because there was no prediction about which way the traits would change. The index represents an overall change in trait profile for each individual. The main hypothesis, that condition would affect *trait change*, was tested by a one-tailed *t*-test, $t(164) = -1.64, p = .053, R^2 = .016$. Participants who read the Chekhov story scored significantly higher *trait change* ($M_{art} = .77$) than participants who read the comparison text ($M_{control} = .69$).

Emotion Change

For each individual, Time 2 emotions (assessed with the Emotion Checklist) were regressed on Time 1 emotions, for each of the 10 emotions. An index including all the emotions was constructed to represent an overall change in emotion profile for each individual. The results show there was a significantly greater *emotion change* among the readers of the Chekhov story than among those who read the comparison text ($t(164) = -2.39, p < .009, R^2 = .034$).

The results for both trait and emotion change are presented in Figure 1. Post-hoc analyses revealed that, on average, no particular trait was changed for all individuals (results of *t*-tests for all 5 traits separately had $ps > .05$, as was expected from large anticipated individual differences in response to the texts), but rather that each individual had unique changes across all five traits, as captured by their *trait change* profile.

Mediational analysis (Baron & Kenny, 1986) was conducted to check whether the impact of literary form on trait change was causally mediated by emotion change. The regression showed a significant association of condition and *trait change*, $F(1,164) = 2.64, p = .05$,



Note. $N = 166$.

FIGURE 1 Mean trait change and emotion change as a function of condition.

$R^2 = .016$, a significant association of condition and the mediator (*emotion change*), $F(1,164) = 5.73, p < .01$, $R^2 = .034$, a significant association of the mediator (*emotion change*) and *trait change*, $F(1,164) = 10.11, p < .01, R^2 = .058$, and in the final step, a loss of association of condition and *trait change* when the mediator (*emotion change*) has been controlled for ($ps > .05$).

DISCUSSION

This research confirmed the hypothesis that art can cause significant changes in self-reported experience of traits under laboratory conditions. A mediating role of emotion in this process was also found. The results of the manipulation check show that whatever differences did occur between the experimental and control groups, they were due to the difference in the artistic form between the experimental and control conditions, rather than the difference in interest level or story content.

The results are somewhat surprising considering that the experiment measured artistic form conservatively—the difference between the conditions was as minimal as possible (the only difference between the stories was that of the overall form, at the sentence and paragraph level) to avoid introducing confounds. Yet the form of Chekhov's prose, even though the story was set in turn-of-the-century Russia, seemingly distant from our undergraduates, changed (even if temporarily) how they, more than a century later, experienced their own personality traits. The effects were significantly greater than for an equally interesting and thematically identical control text. The results of the present study, particularly the

observed mediating effect of emotion on the relationship between literary form and trait change, also suggest that people who read literary art respond in kind to what could be the artist's own process of transformation through emotional change, encoded symbolically within the art (Djikic, Oatley, & Peterson, 2006).

While studying differential personality traits of fiction and nonfiction readers, Mar, Oatley, Hirsh, dela Paz, and Peterson (2006) found that exposure to fiction, unlike exposure to nonfiction, predicts a more positive performance on a variety of social ability measures. Although some might argue that this association is due to the fact that those with better social skill might simply choose to read more fiction, our experiment shows that the causal arrow points in the opposite direction. If fiction can produce fluctuations in one's own traits, through simulation (Oatley, 1999), identification, or self-implication (Kuiken et al., 2004), it seems reasonable to assume that this process can casually lead to a gradual change of oneself toward a better understanding of others as well.

An important issue is the possibility that our results are artifacts of mood induction. Given that art is sometimes used in experiments to induce mood, and that the traits of extraversion and neuroticism have been found to be correlated with positive and negative moods, respectively (Costa & McCrae, 1980), one could argue that the artistic form (as compared with the non-artistic form) simply induced a mood that then correlated with expected changes in traits. We tested this possibility by checking whether the observed change in traits affected implicated extraversion and neuroticism selectively. This was not the case: The art versus control conditions did not significantly impact these traits in particular. Instead, it affected the whole *trait profile* of individuals. For participants in the art condition, the collective changes across all five of their traits were greater than the changes across all five traits calculated for the participants in the control condition. The art condition did not make all participants score more or less highly on neuroticism or extraversion, but uniquely and differentially affected their entire *trait profile*. It therefore appears important to consider that it may not be the sheer presence, but the quality of art-induced emotions—their complexity, depth, range, and intensity—that potentially facilitate the process of trait change.

It is not our argument that art necessarily causes permanent or strong personality changes in those who encounter it. A relationship of an individual psyche to a work of art is a highly complex process that cannot be easily brought into laboratory. Instead, this study shows that the potential for change is there, given that human psyche appears to respond to the artistic form through subtle shifts in the vision of itself. This potential is worth exploring.

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