

# How does art appreciation promote artistic inspiration?

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## Abstract

Through art appreciation, viewers are sometimes inspired to express or implement creative ideas. Such an experience is thought to be important for art learning. In this study, we conduct a questionnaire to examine how art appreciation promotes creative inspiration in non-experts. We hypothesize that: (a) individual experience of art-related activities and self-evaluation of artistic expression affect creative inspiration, mediated by the method of appreciation of artworks; and (b) the type of artworks affects creative inspiration, mediated by the method of appreciation of artworks. The participants were 373 adults, who were not art professionals (179 women, age:  $M = 45.02$ ,  $SD = 13.45$ , range: 20-69 years). The data are analyzed using structured equation modeling for the two hypotheses. The two hypotheses are mostly supported, suggesting that self-evaluation of artistic expression and the type of artworks (especially classic works of art) influence creative inspiration, mediated by the method of appreciation of artworks. However, experience of art-related activities has no significant direct effect on inspiration for artistic creation.

**Keywords:** inspiration, fine arts, art appreciation, art-making

## Introduction

Art appreciation has been studied as a psychological process of aesthetic experience or understanding of artworks (Bullot & Reber, 2013; Leder, Belke, Oeberst, & Augustin, 2004). A recent study suggested the possibility that art appreciation has a more longitudinal effect on viewers' minds and future activities (Pelowski, Markey, Luring, & Leder, 2016). For instance, art appreciation sometimes promotes viewers' own art-making. Some artists claim that they gain inspiration when they appreciate others' artworks. This inspirational type of art appreciation can be expected to contribute to creativity. However, psychologists have not yet examined how we can experience inspiration through art appreciation.

Recent psychological research has tried to define inspiration. Thrash & Elliot (2003, 2004) examined psychological components of inspiration through questionnaire surveys. Their results suggested three components: evocation, transcendence and motivation. They also proposed two processes of inspiration. "Inspired by" is a process to interpret the perceived value of stimulation, the concluding feeling of transcendence, and evocation. In contrast, "inspired to" is a motivational process to realize and extend the value to a new idea, action and product. Following this definition, Okada (2016) proposed

inspiration for creative activities as a phenomenon that a person who takes part in creative activities to a greater or lesser extent, feels highly motivated and moved to generate new ideas and products. The engagement in creative activities is an important factor in experiencing inspiration more frequently and intensively. Previous studies have shown that there is a difference in the experience of inspiration of experts and non-professional people in creative activities (Thrash & Elliot, 2003; Ishiguro & Okada, 2017ab). Non-professional people do not experience inspiration as often or intensely as experts. However, this does not mean that they are not inspired. Rather, inspiration is an important experience for novices' art learning (e.g., Chmi, Jensen, & Hersted, 2015; Tyler & Likova, 2012). Psychological studies on inspiration have just started, and they have not yet examined how non-professional people can experience inspiration to create through art appreciation. Therefore, the current study aims to identify what promotes inspiration for their creation when appreciating paintings. This will contribute to studies on art learning and the development of art education methods.

What factors are important for non-art professional people to be inspired through art appreciation? Art appreciation has been thought of as a process by which to evaluate and understand artworks by others (e.g., Bullot & Reber, 2013; Leder et al., 2004). However, researchers should pay attention to viewers' own creative activities when considering the various effects of art appreciation. Ishiguro & Okada (2018) assumed that the process of being inspired to make art through art appreciation related to both an evaluation of others' artworks and the viewers' own art-making. They divided the process into four phases: initial state, the first, second, and third phases (Figure 1). The initial state shows the viewers' motivation to appreciate or create artworks. The first phase is the process of evaluating others' artworks. The second phase includes the evaluation process and the process of comparing the artworks with the viewers' own art-making. The third phase is the inspired state. Ishiguro & Okada (2018) emphasized the second phase, because the process allows viewers to focus on both others and themselves. Through the process, they can imagine and explore their new art-making according to the ideas and methods illustrated in others' artworks. As a result, they can reach the third phase.

In addition to the art appreciation process, viewer' traits also influence the inspiration to create. As mentioned above,

Subject of processing	Type of processing	Phases of appreciation for inspiration			
		Initial state	Phase 1	Phase 2	Phase 3
Artworks by others	Cognitive	Motivational state for art appreciation	Evaluation of artworks by others	Evaluation of artworks by others	
	Emotional				
Viewer's own art-making	Cognitive	Motivational state for art-making		Reflection on viewer's own art-making	Inspiration for viewer's own art-making
	Emotional				

Figure 1. Outline of the process model of inspiration to make artworks through art appreciation (ITA) (Ishiguro & Okada, 2018)

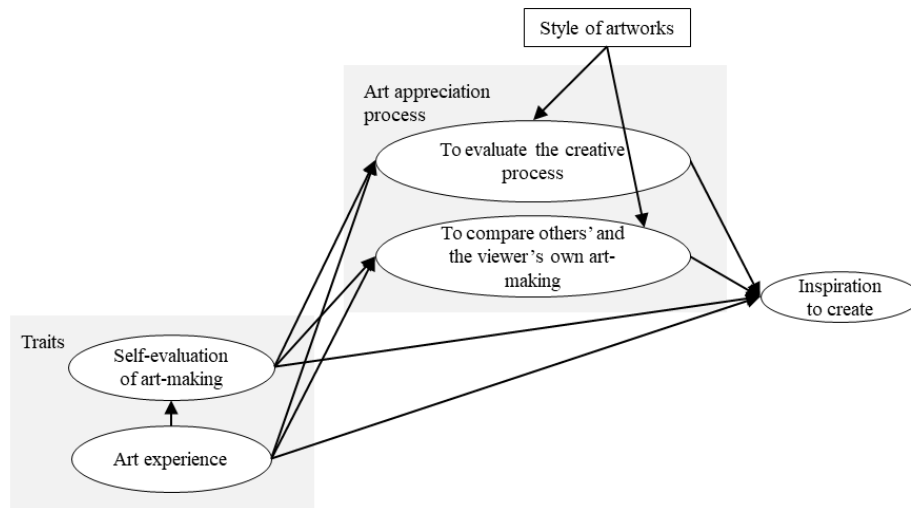


Figure 2. Hypothesis model

art experience can promote inspiration even in non-art professionals (Ishiguro & Okada, 2017b). When focusing on the art appreciation process, art experience promotes viewers' interpretation of artworks. Besides art experience, self-evaluation of art-making is also important. When viewers find a new technique or method, they cannot be motivated without sufficient self-evaluation of art-making. Thrash & Elliot (2003) reported that self-efficacy was positively correlated to frequency and intensity of inspiration. Additionally, Ishiguro & Okada (2017b) showed that self-evaluation of art-making was positively correlated with external inspiration both in students who were art majors and in non-art majors. Therefore, it can be said that art experience and self-evaluation of art-making are important traits for inspiration through art appreciation.

Based on the discussions mentioned above, this study examines how viewers' traits and the art appreciation process affect inspiration to create by focusing on trait factors (art experience and self-evaluation of art-making) and the art appreciation process (in evaluating the creative process and comparing others' artworks with the viewers' own art-making). The hypotheses for this study can be summarized as the follows. Traits such as art experience and self-evaluation of art-making and the art appreciation process, such as evaluating the creative process and comparing others' artworks and the viewers' own art-making, promote inspiration to create. The trait factors also

affect the inspiration, mediated by the art appreciation process. Additionally, art experience promotes self-evaluation of art-making (Hypothesis 1; Figure 2).

Moreover, there is an important factor in inspiration through art appreciation other than traits and the art appreciation process: the style of artworks. Previous studies have shown that styles of artworks, such as classic, abstract and modern, differentiate the art appreciation process (Leder, Gerger, Dressler, & Schabmann, 2012). The style factor also influences creative activities inspired by others' works. Research on product design or drawing shows that the type of exemplars affects the creativity of design or drawing (e.g., Chan & Schunn, 2015; Okada & Ishibashi, 2017). Okada & Ishibashi (2017) indicated that copying unfamiliar artworks, such as abstract paintings, and spending a long time appreciating them (about 20 minutes) promote the creativity of drawings by non-art majors. According to these findings, it can be assumed that the style of artworks affects the intensity of inspiration to create. Therefore, the current study takes style of artworks, such as classic or abstract paintings, into consideration: the style of artworks indirectly influences inspiration to create through art appreciation (Hypothesis 2).

In this study, we conduct a survey for non-art professionals to examine these two hypotheses. We ask them to appreciate several paintings for at least one minute and answer questions to reveal their art appreciation process

and art experience and self-evaluation of art-making. Then, the results are analyzed by applying a covariance structure model. A survey with psychological scales has been applied to several research studies on art appreciation and inspiration (Leder et al., 2012; Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010) because it can examine complicated psychological process, including multiple factors. Therefore, we adopted this approach in this study.

Although a museum visitor is said to spend only tens of seconds on an artwork (e.g., Smith & Smith, 2001), the current study sets a relatively long viewing time in the survey. This is because it can be assumed that viewers have to spend more time to evaluate the creative process and compare others' artworks with their own than the tens of seconds required for perceptual analysis and recognition of the style and contents of artworks (Augustin, Leder, Hutzler, & Carbon, 2008). Of course, researchers may consider that viewers should spend more than one minute, however, we set one minute as the minimum time, considering the burden on the participants.

## Method

The current study asked a private company to conduct an online survey, which was completely anonymous. No personal data were collected except age, gender and residential area. Four hundred participants were randomly selected so that the ratios of male and female and age were equal. This study was approved by the ethics committee of University of Tokyo and all the participants provided informed consent according to the guidelines.

**Participants** We applied further analysis to 373 participants (male = 194, age:  $M = 45.02$ ,  $SD = 13.45$ ), because we excluded participants who had experienced professional education in art.

**Procedure** First, participants viewed four paintings and answered questions about their art viewing. Each painting was presented with the instruction, "Appreciate this artwork for at least 60 seconds, then proceed to the subsequent questions when you have appreciated it for long enough". After 60 seconds, participants could answer the subsequent questions if they answered "yes" to the question, "Have you appreciated this artwork for long enough?" Second, the participants were asked to answer questions about how they felt and what they were thinking during their art viewing. The questions were presented on an 18-item questionnaire to evaluate the art appreciation process on a 5-point Likert scale (1 = strongly disagree and 5 = strongly agree), and a 5-item questionnaire to evaluate the intensity of external inspiration on a 7-point Likert scale (1 = strongly disagree and 7 = strongly agree) (Ishiguro & Okada, 2015). The final part of the survey included two measures of individual differences in art experience and self-evaluation of art-making. Art experience was assessed via adjusted questions in an Art Experience Questionnaire (Chatterjee, Widick, Sternschein, Smith, & Bromberger, 2010). Self-evaluation

of art-making was through a 6-item questionnaire with a 5-point Likert scale (Ishiguro & Okada, 2017ab).

We selected two classic and two abstract paintings (in total four paintings) in accordance with the previous study (Leder et al., 2012). The classic paintings were "Fronleichnamprozession in Hofgastein" by Adolph von Menzel and "Poplars on the Bank of the Epte River, Seen from the Marsh" by Claude Monet. The abstract paintings were "Untitled (one on Brown)" by Fiona Rae and "Abstract Painting 858-4" by Gerhard Richter. These paintings were randomly presented to each participant.

## Results

Reliability scores for each variable were calculated according to the revised version of factor composition of scales for Art Appreciation Process, Self-Evaluation of Art-Making and Inspiration from the Outside (Ishiguro & Okada, 2017b). Each  $\alpha$  score was more than .80.

Tables 1 and 2 show descriptive statistics and factor correlations of each variable, respectively. Table 2 shows that inspiration to create demonstrates a significantly positive correlation with the other variables, except for style of artwork ( $ps < .05$ ). We assigned dummy variables to the style of artwork: 0 to classic paintings and 1 to abstract. It can be said that these results show a correlation pattern which is not contradictory to our hypothesis.

We applied the lavaan package (Rosseel, 2012) to the subsequent covariance structure analysis with the use of the open source software R 3.1.0. In verification of our hypothesis, each latent variable was estimated by inputting all the observational variables. All the paths included in the hypothesis and error correlations between the art appreciation process were included in the model.

The results show a sufficient model fitness ( $GFI = .99$ ,  $AGFI = .98$ ,  $CFI = .97$ ,  $RMSEA = .049$  [ $90\%CI = .047 - .052$ ]). Additionally, the coefficients of determination of the objective variable, inspiration to create, were quite high ( $R^2 = .69$ ), which suggests that 69% of the objective variables can be explained by the model. Therefore, we adopted the model in Figure 4 to illustrate how art appreciation promotes inspiration to create.

Moreover, further analysis was conducted to examine how art experience and self-evaluation of art-making influence inspiration to create, mediated by the art appreciation process. The multiple mediation effects were analyzed by applying the Sobel test (Hayes, Preacher, & Myers, 2011; Preacher & Hayes, 2008) and the bootstrap method (sample size = 1000).

Table 3 shows that art experience does not directly affect inspiration to create ( $b^* = -.01$ ), however it does with other mediating variables. Finally, the total effect of art experience on inspiration to create is significant ( $b^* = .28$ ,  $p < .001$ ). Thus it can be assumed that art experience influences inspiration to create when mediated by self-evaluation of art-making and the art appreciation process,

rather than directly influencing the inspiration. However, the results suggest a direct effect of self-evaluation of art-

Table 1 Correlation scores of each variable

			1	2	3	4	5	6
1	Traits	Art experience		.52 **	-	.31 **	.31 **	.32 **
2		Self-evaluation of art-making			-	.39 **	.44 **	.48 **
3	Style of artworks					-.09 *	-.11 **	-.09 *
4	Art	To evaluate the creative process					.85 **	.75 **
5	appreciation	To compare others' and the viewer's own art-making process						.81 **
6	Inspiration to create (intensity)							

Note: \*  $p < .05$ , \*\*  $p < .01$ .

Table 2 Direct and indirect effects of art experience and self-evaluation of art-making on inspiration to create

	Estimate	SE	Z	95% CI		Std.all
				Lower	Upper	
Art experience						
Direct	-0.011	0.056	-0.199	-0.120	0.102	-0.005
Indirect 1	0.047	0.023	2.033	0.011	0.101	0.022
Indirect 2	0.103	0.049	2.086	0.012	0.211	0.048
Indirect 3	0.073	0.021	3.568	0.040	0.120	0.034
Indirect 4	0.239	0.053	4.507	0.159	0.361	0.111
Indirect 5	0.155	0.038	4.056	0.091	0.248	0.072
Total	0.605	0.103	5.861	0.431	0.824	0.282
Self-evaluation of art-making						
Direct	0.265	0.053	5.010	0.164	0.367	0.149
Indirect 1	0.125	0.030	4.163	0.068	0.185	0.071
Indirect 2	0.408	0.062	6.634	0.289	0.533	0.230
Total	0.799	0.064	12.553	0.675	0.923	0.451

Note: Indirect 1 means the indirect effect mediated by the art appreciation process to evaluate creative process; indirect 2 means the indirect effect mediated by the art appreciation process of comparing others' and the viewer's own art-making; indirect 3 means the indirect effect mediated by self-evaluation of art-making and art appreciation process of evaluating the creative process; indirect 4 means the indirect effect mediated by self-evaluation of art-making and art appreciation process of comparing others' and the viewer's own art-making; indirect 5 means the indirect effect mediated by self-evaluation of art-making

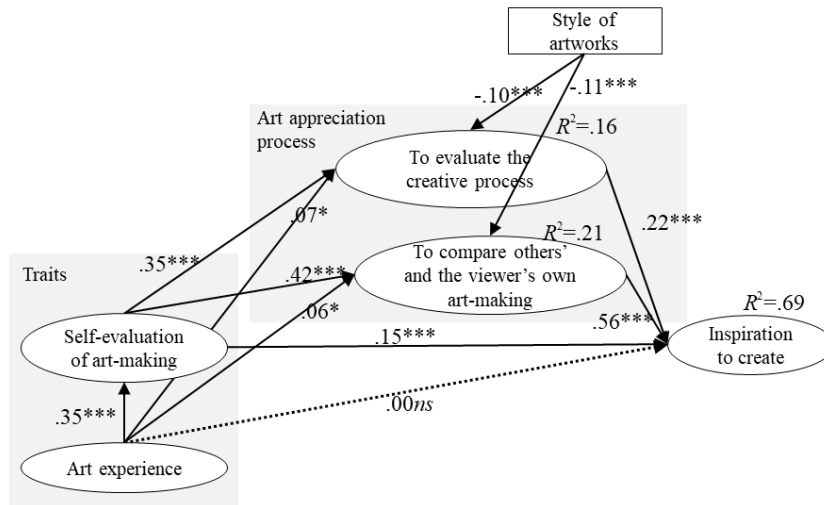


Figure 3. The results of covariance equation model analysis

\* $p < .05$ , \*\*\* $p < .001$

making on inspiration to create ( $b^* = .15, p < .001$ ). There were also indirect effects mediated by the art appreciation process of evaluating the creative process and comparing

others' and the viewer's own art-making ( $b^* = .07, .23, ps < .001$ ). In other words, the total effect of self-evaluation of art-making on inspiration to create (.45) can be explained by

the indirect effect mediated by the art appreciation process (in total .30), rather than the direct effect. These results support hypothesis 1 and imply that art experience and self-evaluation of art-making contribute to inspiration to create when mediated by the art appreciation process, rather than directly affecting the inspiration.

Regarding hypothesis 2, the results show that the style of artworks had a significant influence on the art appreciation processes. In addition, the style of artworks affected the inspiration to create, mediated by the art appreciation process, which supports hypothesis 2. Interestingly, because the path coefficients were negative values, it can be assumed that viewers appreciating artworks tend to evaluate the creative process and to compare others' and their own art-making more when viewing classic paintings rather than abstract ones.

These results generally support our hypothesis model. However, art experience did not significantly affect inspiration to create, which was an unexpected result.

## Discussion

The present study has examined how art experience, self-evaluation of art-making and the art appreciation process affect inspiration to create by conducting a survey of non-professional viewers regarding the appreciation of classic and abstract paintings. The first hypothesis was that art experience and self-evaluation of art-making have a direct influence on inspiration to create, and an indirect influence when mediated by the art appreciation process. The second hypothesis assumed that the style of artworks affects the art appreciation process. These hypotheses were verified by covariance structure analysis following the approaches applied in previous studies on art appreciation and inspiration.

The results generally support the two hypotheses. Although art experience has no direct effect on inspiration to create, it promotes inspiration when mediated by self-evaluation of art-making and the art appreciation processes. The size of effect of art experience on the inspiration is not as great as that of self-evaluation of art-making, yet the total effect cannot be dismissed ( $b^* = .28$ ). In contrast, self-evaluation of art-making has a direct effect on inspiration to create. In other words, people who have high self-evaluation of art-making experience inspiration to create more intensively when they appreciate paintings. It is also suggested that such an experience can be heightened by the art appreciation process when evaluating the creative process and comparing others' and the viewer's own art-making. Especially, the art appreciation process of comparing others' and the viewer's own art-making has a marked effect on inspiration to create.

**Psychological process of inspiration through art appreciation** The current study reveals how trait factors such as art experience and self-evaluation of art-making and process factors of art appreciation influence the inspiration to create, by focusing on an inspiration experience evoked by art appreciation. Although previous studies indicated that

creative experience and achievements promote the frequency and intensity of inspiration (Thrash & Elliot, 2003, 2004), this study illustrates a more complex relationship between traits and processes.

**Contributions and Limitations** Inspiration is an important factor in art learning, and even in education in general. If it can be discovered how learners experience inspiration to do something, this may contribute to the development of educational methods. In regard to art learning, the current findings point out important factors in promoting inspiration through art appreciation. Such factors may be important in developing educational methods to unite art appreciation and art making.

However, this study has several limitations. First, the participants may have appreciated paintings in different environments (e.g., monitor size, lighting) because they took part in an online survey. Such differences should be controlled for in future study. Second, this study might not have assessed the participants' art experience in a valid way. The results show very low scores in art experience, which may have influenced the estimation of the art experience effect on the inspiration to create. The effect should be replicated by applying a more sensitive scale of art experience, which can be used for people not majoring in art. Third, we have to note that the current findings are limited to art appreciation of paintings. However, if researchers were to consider inspiration to create through appreciating other types of artwork, such as music, drama, and dance, they would have to modify the factors in the model to promote the inspiration. Finally, the current study may contribute to art learning in museums, lifelong learning and hobbies, because we focus on non-art majoring people over the age of twenty. Future study might expand the group of participants, for example by including school children and students, to examine how differently viewers in each developmental stage experience inspiration to create through art appreciation. Such efforts will contribute art learning in schools.

## References

- Augustin, M. D., Leder, H., Hutzler, F., & Carbon, C. C. (2008). Style follows content: On the microgenesis of art perception. *Acta Psychologica, 128*, 127-138.
- Bullot, N. J., & Reber, R. (2013). The artful mind meets art history: Toward a psycho-historical framework for the science of art appreciation. *Behavioral and Brain Sciences, 36*, 123-137.
- Chan, J., & Schunn, C. D. (2015). The impact of analogies on creative concept generation: Lessons from an in vivo study in engineering design. *Cognitive Science, 39*, 126-155.
- Chatterjee, A., Widick, P., Sternschein, R., Smith, W. B., & Bromberger, B. (2010). The assessment of art attributes. *Empirical Studies of the Arts, 28*, 207-222.
- Chemi, T., Jensen, J., & Hersted, L. (2015). *Behind the scenes of artistic creativity: Processes of learning, creating and organising*. New York, NY: Peter Lang.

- Cupchik, G. C., & Gebotys, R. J. (1988). The search for meaning in art: Interpretive styles and judgments of quality. *Visual Arts Research, 14*, 38-50.
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117-140.
- Hayes, A. F., Preacher, K. J., & Myers, T. A. (2011). Mediation and the estimation of indirect effects in political communication research. In E. P. Bucy & R. Lance Holbert (Eds), *Sourcebook for political communication research: Methods, measures, and analytical techniques* (pp. 434-465). New York: Routledge.
- Ishiguro, C., and Okada, T. (2017a). The effects of art experience, competence in artistic creation, and methods of appreciation on artistic inspiration, Poster presented at the 31st International Congress of Psychology, Yokohama.
- Ishiguro, C., and Okada, T. (2017b). Development of psychological scales for measuring attitudes for art-making and appreciation and their effects on artistic inspiration between art majors and non-art majors, Poster presented at The International Symposium: Art learning & creativity, Tokyo.
- Ishiguro, C. & Okada, T. (2018) How can inspiration be encouraged in art learning? In T. Chemi & X. Du (Ed.), *Arts-based methods in education around the world* (pp. 205-230). Denmark: River Publishers.
- Langer, E., Pirson, M., & Delizonna, L. (2010). The mindlessness of social comparisons. *Psychology of Aesthetics, Creativity, and the Arts, 4*, 68-74.
- Leder, H., Belke, B., Oeberst, A., & Augustin, D. (2004). A model of aesthetic appreciation and aesthetic judgments. *British Journal of Psychology, 95*, 489-508.
- Leder, H., Geger, G., Dressler, S. G., & Schabmann, A. (2012). How art is appreciated. *Psychology of Aesthetics, Creativity, And The Arts, 6*, 2-10.
- Okada, T. (2016). "Shokuhatsu suru communication to museum (Inspiring communication and the museum)," in *Shokuhatsu Suru Museum: Bunka Teki Koukyou Kuukan no Aratana Kanousei wo Motomete (Inspiring the Museum: an Inquiry into New Possibilities of Cultural Public Space)*, eds K. Nakakoji, H. Shindo, Y., Yamamoto, and T. Okada, Kyoto: Airi Shuppan.
- Okada, T., & Ishibashi, K. (2017). Imitation, inspiration, and creation: Cognitive process of creative drawing by copying others' artworks. *Cognitive Science, 41*, 1804-1837.
- Pelowski, M., Markey, P. S., Luring, J. O., & Leder, H. (2016). Visualizing the impact of art: An update and comparison of current psychological models of art experience. *Frontiers in Human Neuroscience, 10*(160). doi:10.3389/fnhum.2016.00160
- Rossel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software, 48*, 1-36.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.
- Smith, J. K., & Smith, L. (2001). Spending time on art. *Empirical Studies of the Arts, 19*, 229-236.
- Thrash, T. M., & Elliot, A. J. (2003). Inspiration as a psychological construct. *Journal of Personality and Social Psychology, 84*, 871-889.
- Thrash, T. M., & Elliot, A. J. (2004). Inspiration: core characteristics, component processes, antecedents, and function. *Journal of Personality and Social Psychology, 87*, 957-973.
- Thrash, T. M., Maruskin, L. A., Cassidy, S. E., Fryer, J. W., & Ryan, R. M. (2010). Mediating between the muse and the masses: Inspiration and the actualization of creative ideas. *Journal of Personality and Social Psychology, 98*, 469.
- Tyler, C. W., & Likova, L. T. (2012). The role of the visual arts in enhancing the learning process. *Frontiers in Human Neuroscience, 6*(8). doi: 10.3389/fnhum.2012.00008