Effects of Art Expertise on Aesthetic Evaluation Across Human and AI Art

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Abstract

In recent years, the widespread application of artificial intelligence (AI) in artistic creation has sparked widespread discussion. Existing studies have shown that there are significant differences in people's perception and evaluation of artworks created by humans and generated by AI. However, in the research on the evaluation of AI-generated artworks, art expertise as an important influencing factor has not been fully explored. This study aims to examine how art expertise affects the emotional intensity when viewing artworks and the evaluation of the creativity of AI artworks. In addition, the study introduced participants' attitude towards AI as a moderating variable to further explore its role in the relationship between art expertise and creativity evaluation. We conducted a survey (N=258) that contained 12 images of artworks created by either AI or humans and asked participants to evaluate the images. The results show that the more artistic expertise a person has, the lower their evaluation of the creativity of AI-generated works, but no other effects were found.

Keywords: AI generated art, art expertise, AI attitude, art evaluation

Introduction

In recent years, the rapid development of artificial intelligence technology has changed many aspects of human life. In the field of art and culture, the popularization of artificial intelligence (AI) has profoundly changed the way art is created and presented. More and more artists are applying AI technology to their creative process, the impact of AI art on the economic, cultural and social levels is deepening (Chatterjee, 2022; Giordano et al., 2021). Many studies have shown that AI can create authentic art, rather than just mimicking existing art styles (Colton & Wiggins, 2012; Jordanous, 2012; Toivanen et al., 2019). For example, AI not only created paintings similar to works by famous masters such as Rembrandt (Iansiti & Lakhani, 2020), but also created original artistic styles (Schwab, 2017). The originality, creativity and emotions involved in art were considered unique to humans (Coeckelbergh, 2017), but AI can already generate works that are indistinguishable from human-created artworks now. This has prompted many researchers to think about the definition and meaning of artworks. Can audiences have an emotional connection with AI artworks? Do they allocate creativity and intention to AI artworks? More generally, what are the different artistic experiences they have when viewing AI-generated and human-created artworks? To evaluate the artistic value of such works and and improve current AI models for creating artwork, it is crucial to understand the psychological mechanisms and experiences of audiences when engaging with artworks produced by different methods.

Evaluating AI-generated vs. Human-made Artworks

In the study of the artistry of AI-generated works, creativity and emotional are two aspects that are often studied. Creativity is at the core of art and is defined as the creation of something new and useful (Burroughs et al., 2015). Turkle (2005) pointed out in a review of the general concept of computers or artificial intelligence and their differences and distinctions from humans that the ability to feel and share emotions is one of the key points

given by respondents. Many studies have found that AI-generated works can induce emotional experiences, but these emotional experiences may be different from the feelings people have when appreciating human artworks: In a study by Demmer et al. (2023), most participants reported emotions to both human and AI artworks and attributed intentions to the artworks, but human art caused stronger emotional responses. Millet et al. (2023) found that computer-generated art evokes fewer emotions in individuals and that people perceive such works as less creative. In the Hong (2018) focus group study, most participants still judged the works as works of art when they knew they were AI-generated. Participants believed that artificial intelligence has the ability to create art, but this creativity should be distinguished from human creativity. In previous related studies, in addition to the way artworks are created, researchers have also introduced many factors that affect art evaluation and experience, such as whether the artwork is abstract or concrete (Gangadharbatla, 2021), or whether the work is labeled as created by artificial intelligence (Kirk et al., 2008, Hong, 2018b). Taken together, a large number of studies have shown that people have different artistic experiences and evaluations when viewing human artworks and works created by artificial intelligence. What factors cause this difference? The psychological mechanism that affects art evaluation is very complex, among which artistic experience is an important factor. However, there is still limited research on how artistic experience affects people's evaluation of AI artworks.

Art Expertise

Art expertise arises from the complex interplay of cognitive and affective processes, expertise can change the experience of emotional stimulation (Leder et al.,2014). Individual who exposed to art more frequently may has less response to the artworks' direct affective valence than laypeople. They may pay more attention to other features, such as style and artistic execution (Leder et al., 2004). Therefore, art expertise is also an important factor affecting art experience. In this study, we will investigate participants’ art knowledge through

the Revised Aesthetic Fluency Scale (Cotter et al., 2023) and explore its relationship with emotional experience and art evaluation.

Some studies have mentioned the computer-art bias in art evaluation, which means that people are more likely to think that computer-generated works have lower aesthetic value (Kirk et al., 2008b). This may be due to high-level cognitive judgment that computer art is less value or inherent visual characteristics of computer-generated art that are disliked (Chamberlain et al., 2017b).Study conducted by Kirk et al. (2008c) showed that, when participants viewed artworks labeled "computer," they were more likely to give lower art evaluations. Study shows that humans' evaluations of AI-generated art are not only influenced by aesthetic judgments, but are also closely related to their beliefs about "human uniqueness." （Millet et al., 2023). Anthropocentrism refers to the perceived precedence of the human species over other species (Fortuna et al., 2021), this preferential treatment of the humankind over other species can be an obstacle to AI acceptance (Schmitt, 2019). Therefore, the artistic evaluation of AI-generated works may also be affected by individuals' attitudes towards AI.

The current study

In this study, the core research question is how art expertise affects people's art evaluation in terms of perceived emotional intensity and creativity. 'AI attitude"'is introduced as a moderating variable to explore its moderating role in the relationship between art expertise and art evaluation. This perspective helps to reveal the psychological mechanisms and evaluation preferences experienced by people when facing AI art.

Hypothesis 1: Individuals with higher levels of art expertise are expected to exhibit emotional responses of lower intensity to artworks, regardless of whether the works are AI-generated or human-made.

Hypothesis 2: Individuals with higher artistic expertise tend to give lower creativity rating when evaluating AI-generated art.

Hypothesis 3: AI attitude may moderate the correlation between art expertise and creative evaluation of AI-generated artwork.

Methods

Participants

In total, 258 people participated in the study. From these, 43 participants were excluded because of not completing the survey or giving consent. 16 participants were excluded for not passing the control question designed to check whether they are paying attention. The removal resulted in a final 199 participants included in the analysis (143 female; 47 male; two non-binary; seven preferred not to say/self - described). Most participants (n = 157; 79%) were in the age group 18-24 years old.

Participants took part either in exchange for course credits or voluntarily without reward. Convenience and snowball sampling was used - the link for this study had been sent around in online group-chats, to friends and acquaintances of the researchers, encouraging people to share the link further. The study had also been posted on the SONA study system of the University of Groningen.

The research was approved and conducted in accordance with the ethical codes and regulations of the Faculty of Behavioural and Social Sciences at the University of Groningen (registration code: PSY-2425-S-0337).

Materials

The study ran on Qualtrics (https://www.qualtrics.com/) and was available in English and Dutch. Participants completed the survey on their own devices without hardware restrictions.

Artworks

From the artworks used, six were human-made, and six artificial intelligence (AI) - generated. See Appendix A for all artworks. Only abstract artworks were selected for reasons discussed in the introduction. Abstract was defined as no figurative elements present. Moreover, images were selected so that human-made and AI-generated artworks were pairwise similar in color, composition or dynamic.

Artwork Descriptions

Every artwork was preceded by a short textual description that framed the work either neutrally, positively, or negatively and mentioned origin. The descriptions were created by the research team specifically for this paper. There were two AI-generated positive, two AI-generated negative, two AI-generated negative, two human-made positive, two human-made negative and two human-made neutral descriptions. There was no deception on the origin of artworks. The framing was not based on actual facts about the artworks but was made-up. For a list of all descriptions, as well as their translations into Dutch, see Appendix B.

Intentionality, Beauty and Creativity

Participants answered three evaluative statements about intentionality, creativity and beauty using sliders on a scale ranging from 0 to 100, based on Cox et al. 2024. For 'beauty' the statement "I find this work beautiful" was presented. A score of 0 represented "strongly disagree", and a score of 100 represented "strongly agree". For 'intentionality' and 'creativity' the statements "In my opinion, the level of intentionality involved in the creation of this work is…" and "In my opinion, the level of creativity involved in the creation of this work is…" were presented, respectively. A score of 0 indicated "very low" and a score of 100 indicated "very high". For the translations of these statements, see Appendix C.

Geneva Emotion Wheel

Participants were then presented with the Geneva Emotion Wheel (GEW), a tool to label emotions and record emotional intensity and valence in surveys (Scherer, 2005). Participants were asked to select the emotion-label that best captured their emotional response to the artwork, as well as indicate the intensity of that emotion, within one click. They were, for example, able to choose between emotions such as ‘Anger’, ‘Surprise’, ‘Fear’ or ‘Joy’. If no emotion was experienced, they could select the “None” option, and if their emotion was not represented in the wheel, they could select “Other”. Cronbach's α is not specified. An image of the GEW from our study, along with all the emotions and their translations, can be found in Appendix D.

Aesthetic Fluency Scale

The aesthetic fluency scale was used as an approximate measure for art knowledge (Cotter et al., 2023). Due to time constraints for the survey, the short version of the questionnaire was used. Participants' familiarity with 10 artists and art-related terms was assessed. Question 11 was a control question, used as an exclusion criterion for analysis. The questionnaire presents a term, for example “Gouache” and gives three response options - “I don’t really know anything about this artist or term”, “I’m familiar with this artist or term”, and “I know a lot about this artist or term”. Cronbach's α was 0.84. For the translations of the response options, see Appendix C.

General Attitudes toward Artificial Intelligence Scale

Participants completed an attitude scale assessing their attitudes of AI, consisting of five statements adapted from the General Attitudes toward Artificial Intelligence Scale (GAAIS, Schepman & Rodway, 2020). “Artificial Intelligence is exciting”, “I am impressed by what Artificial Intelligence can do”, “There are many beneficial applications of Artificial Intelligence”, “I am interested in using artificially intelligent systems in my daily life”, and “Artificial Intelligence can have positive impacts on people's wellbeing” were answered on

sliders ranging from 0 to 100 in steps of 10, from strongly disagree to strongly agree. Cronbach's α was 0.89. For the translations of the response options, see Appendix C.

Procedure

After accessing the study environment, participants were informed about the study and its procedure, and then signed an informed consent. Next, participants were asked about age, having five options - 18-24, 25-34, 35-44, 45-54, or 55+ years old, and about gender, also having five options - male, female, non-binary, prefer to self describe, or prefer not to say.

The respondents were distributed equally among six experimental groups. Each group viewed the same 12 artworks and read the same descriptions, but the description–artwork pairings varied across groups, as shown in Table 1. The sequence of description-artwork presentation was randomised per participant.

First, participants evaluated the 12 artworks. Each artwork was preceded by one of the descriptions. There was no time limit to seeing the description. Participants had to click “next” to proceed to the next screen showing an artwork. On this screen descriptions were not visible anymore.

Each artwork appeared for a minimum of five seconds. After that the participant could choose freely when to continue, by clicking “next”. The time spent looking at each artwork, between first appearance of the artwork until clicking “next”, was measured for every participant, later used as the looking time variable.

In the next step the artwork was not visible anymore. Participants answered the three evaluative statements concerning intentionality, creativity and beauty and continued. On the same page they used the GEW.

After all artworks had been evaluated, participants filled out the two questionnaires. First, the 11-item Aesthetic Fluency scale was presented (Cotter et al., 2023). On the next

page, participants completed the General Attitudes toward Artificial Intelligence Scale (GAAIS, Schepman & Rodway, 2020).

The study concluded with a debriefing screen that explained the manipulation of the framings, as well as the looking-time measurements, and informed all participants that they were not deceived of the true origin of each artwork. Participants were thanked for their participation and, if applicable, directed to collect their course credits through the university's SONA system.

Data analysis

In this study, the data of only the neutral trials was selected for analysis. To prepare the data, mean scores were computed for each participant on the art expertise and AI attitude scales. We also calculate the emotional intensity of each participants through the GEW. More specifically, intensity is the Euclidean distance (sqrt(x^2+y^2)) from the point where the participant clicked on the GEW and the center of the GEW. In other words, it is the length of the line segment from that click point to the origin of the reference frame that passes through the centre of the GEW. All distances shorter than 75 pixels are excluded, because they are in the centre area where the options 'None' and 'Other' are located. Those clicks did not refer to an emotions in the GEW, and are therefore not taken into account. Since one of the hypotheses of this study is that artistic knowledge generally affects the participants' emotional intensity, regardless of whether the works are AI-generated or human-made, we calculated the average emotional intensity generated by participants for the works in the neutral group.

In order to test the research hypotheses, three regression models were constructed. Model 1 analyzed the predictive effect of art expertise on emotional intensity. Model 2 examined whether art expertise predict participants' evaluation of the creativity of AI works.

In Model 3, AI attitude was introduced as a moderating variable to further test whether it interacted with art expertise and thus moderate the evaluation of the creativity of AI works.

The mean completion time of the study was 2122 seconds (35.4 minutes), while the median time was 726 seconds (12.1 minutes). This shows the skewed distribution of the duration times, most likely because of participants not completing the study in one go. Researchers made the decision to exclude participants, whose duration time was under 300 seconds (5 minutes). This duration had been determined by doing a trial run to see what would be the lowest time for a participation that still seems serious. We considered times under 300 seconds a non-serious engagement with the experiment for the sake of speed. This decision had no consequences, as the lowest completion time was 302 seconds, and thus no participants were excluded for too low completion time. In summary, Model 1 included 164 participants, and Models 2 and 3 included 199 participants.

Table 1

Artwork x Description Pairings per Group for Human-made and AI-generated artworks

Group	Positive Description		Negative Description		Neutral Description	
	D_1	D_2	D_3	D_4	D_5	D_6
1	1	2	3	4	5	6
2	6	1	2	3	4	5
3	5	6	1	2	3	4
4	4	5	6	1	2	3
5	3	4	5	6	1	2
6	2	3	4	5	6	1

Note: The numbers under description are representative of the artworks assigned in that group, see Appendix A. D_1, etc. are the human and AI descriptions, see Appendix B.

Results

Among the three regression models, only the second model showed significant results. In contrast, model 1 and model 3 failed to prove the corresponding hypothesis.

Since participants with an emotion intensity less than 75 were excluded from Model 1, and the variable of emotion intensity was not included in Models 2 and 3, two descriptive data are presented separately, as shown in Table 2 and Table 3. The correlations among the variables are shown in Tables 4 and 5. Participants reported low to moderate levels of perceived creativity (M = 32.79, SD = 23.25) and artistic expertise (M = 1.71, SD = 0.47), and moderately positive attitudes toward AI (M = 58.76, SD = 23.26). The variables 'art expertise' and 'emotional intensity' were weakly correlated (r= .02, p = .80, N=164), and there was a negative correlation between the variables 'art expertise' and 'ai-creativity' (r= -.20, p=0.004 , N=199).

Table 2

Descriptive Statistic of Model 1

	art expertise	Emotional intensity
Valid	164	164
Missing	0	0
Mean	1.710	214.776
Std. Deviation	0.464	89.518
Minimum	1.000	87.550
Maximum	3.000	458.000

Table 3

Descriptive Statistic of Model 2 and Model 3

	ai-creativity	art expertise	AI attitude
Valid	199	199	199
Missing	0	0	0
Mean	32.791	1.714	58.764
Std. Deviation	23.250	0.465	23.258
Minimum	0.000	1.000	0.000
Maximum	99.000	3.000	100.000

Table 4

Correlations Among Main Variables in Model 1

Variable		Emotional intensity	art expertise
1. Emotional intensity	Pearson's r	—	
	p-value	—	
2. art expertise	Pearson's r	0.020	—
	p-value	0.802	—

Table 5

Correlations Among Main Variables in Model 2 and Model 3

Variable		ai-creativity	art expertise	AI attitude
1. ai-creativity	Pearson's r	—		
	p-value	—		
2. art expertise	Pearson's r	−0.202	—	
	p-value	0.004	—	
3. AI attitude	Pearson's r	0.414	−0.292	—
	p-value	< .001	< .001	—

Assumption check

Before interpreting the regression results, the linear regression assumptions of the three models were assessed, including linearity, homoscedasticity, normality of residuals.

Model 1 generally met the assumptions of linearity and homoscedasticity, but the standardized residuals deviate from a normal distribution, violated the normality of residuals.

Model 2 generally met the assumptions of linearity, homoscedasticity and normality of residuals, with only minor deviations observed in the residual distribution.

Model 3 generally met the assumptions of linearity, homoscedasticity and normality of residuals, but multicollinearity diagnostics revealed severe multicollinearity.

Art expertise and Emotional Intensity

The results of model 1 showed that $F(1, 128) = 1.55$, $p = .22$, indicating that the regression model was not significant. Art expertise did not significantly predict emotional response ($\beta = –0.11$, $p = .22$). Therefore, Hypothesis 1 was not supported.

Art expertise and AI creativity

Model 2 was statistically significant, $F(1, 197) = 8.42$, $p = .004$, indicating that artistic expertise predicts the creativity ratings for AI-generated artworks. Tables 6 and 7 show the model summary and result of the regression analysis respectively.

Table 6

Model Summary for the Regression Predicting AI Creativity form Art Expertise

Model	R	R^2	Adjusted R^2	RMSE	R^2 Change	F Change	df1	df2	p
M_0	0.000	0.000	0.000	23.250	0.000		0	198	
M_1	0.202	0.041	0.036	22.826	0.041	8.422	1	197	0.004

Note. M_1 includes art expertise

Table 7

Result of Regression Analysis Predicting AI Creativity

							95% CI	
Model		Unstandardized	Standard Error	Standardized	t	p	Lower	Upper
M_0	(Intercept)	32.791	1.648		19.896	< .001	29.541	36.042
M_1	(Intercept)	50.127	6.189		8.100	< .001	37.922	62.332
	art expertise	−10.117	3.486	−0.202	−2.902	0.004	−16.992	−3.242

As shown in Table 6, art expertise negatively predicts AI creativity scores. The regression coefficient was -10.12 ($p = .004$, 95%*CI* [-16.992, -3.24]). The regression equation was:

AI-Creativity = 48.20 – 10.12 × art expertise

Which means that for every unit increase in art expertise, AI-creativity decreases by 10.12 units. The model explains 4.1% of the total variance (R^2 = .041). This supports the hypothesis that individuals with higher art expertise tend to give lower creativity rating when evaluating AI-generated art. Figure 1 displays the marginal effect of art expertise on AI-generated artworks' creativity rating.

AI Attitude as a Moderator

Model 3 was statistically significant overall (F (3, 195) = 15.09, p < .001), R^2=.19, indicating that the model explains 18.8% of the variance in AI creativity ratings. AI attitude significantly positively predicted AI-generated artworks' creativity ratings (B = 0.732, p = .002). However, neither art expertise (B = 5.576, p = .453) nor the interaction term (B = –0.184, p = .130) was significant. Therefore, no evidence was found to prove the existence of an interaction effect between art expertise and AI attitude, which means Hypothesis 3 must be rejected.

Discussion

The purpose of the study was to gain more understanding of how art expertise influence art evaluation, in terms of emotional intensity and perceived creativity, and how AI attitude moderate the correlation between artistic expertise and creative evaluation of AI-generated artworks. The results revealed the negative impact of art expertise on perceived creativity of AI-generated artworks. However, it failed to prove the impact of art expertise on emotional intensity, this result contrasts with the suggestion by Leder et al. (2004), who proposed that individuals with greater exposure to art may exhibit a reduced emotional response to the immediate affective valence of artworks compared to laypeople. Although we failed to find a moderating effect of AI attitude on art expertise and perceived creativity, in the analysis of

Model 3, we found that AI attitude can positively predict the evaluation of the creativity of AI-generated artworks. Kirk et al. (2008) have shown that when people view AI-generated artworks, they tend to give lower aesthetic evaluations due to computer-art bias. This may be related to the present findings, in that individuals with a more positive attitude toward AI might be less influenced by the "AI-generated" label when making their evaluations.

Limitations and Future directions

One limitation of our study concerns the possibility of priming effect. The priming effect refers to the influence of the previous stimulus on the response to the subsequent stimulus (Shapir et al., 2023). As described in method part, participants were informed whether the images are human-made or AI-generated before they saw each, and there were positive, negative and neutral description of human-made and AI-generated art. These descriptions appeared randomly, that is, although the data we analyzed were from the 'neutral group', since the participants were exposed to different conditions in the experiment, we cannot be certain whether their previous impressions of AI-generated artwork or human-made artwork had an unconscious influence on their subsequent evaluations. Before seeing the artwork described by neutral, they may have seen only positive evaluations, only negative evaluations, or both. This residual effect of cross-condition information may have a subtle interference in the participants' creativity scores or emotional reactions, thereby affecting the internal validity of the results. This study adopted randomization in the order of images, which indeed reduced the systematic bias and, on average, participants may receive more balanced stimuli. However, since we only analyzed the neutral group, at the individual level, the previous order information received by each person before entering the neutral trial may be different, and this difference may produce unequal "residual effects".

To avoid the influence of the priming effect, researchers can remove the positive or negative descriptions of human and AI artworks before the images and only inform

participants how the works were created. To further reduce the risk of bias, researchers can use a a fully blind design, making participants unaware of the creation information of the artwork during the entire evaluation process.

Another limitation in this study concerns with the measurement of AI attitude. This study did not find the moderating effect of AI attitude, which means that participants' attitude toward AI do not influence the effect of art expertise on their creativity evaluation of AI artworks. However, we found an effect of AI attitude itself on perceived creativity evaluation, that is, participants' attitude toward AI directly affected creativity evaluation. To test participants' attitudes towards AI, we chose five questions from General Attitudes toward Artificial Intelligence Scale (GAAIS). The scale provides a reliable measure of individuals' general attitudes towards AI (Schepman & Rodway, 2020), however, it focuses more on the overall evaluation of artificial intelligence in daily life and social functions, we are not sure to what extent it can reflect the participants' attitudes towards AI art.

Future research can directly use AI attitudes as independent variables to further explore how they affect people's evaluation of creativity. At the same time, it is also possible to refine "general attitudes toward AI" into "attitudes toward AI art" to test whether this more targeted attitude can effectively predict art evaluation results.

In this study, the final sample included 199 participants, 157 of whom were aged between 18 and 24 years old, and many of the participants were recruited through the SONA system. These are young people with higher education levels account for the majority of the sample. Both age and education level are likely to have an impact on attitudes toward AI, criticality toward technology, aesthetic standards, and familiarity with traditional art forms. Younger generation have more exposure to digital environments and may be more open to new technologies, and therefore may be more receptive to AI-generated artworks. Therefore, the current findings may not fully reflect the evaluation patterns of AI artworks by people of

a wider age group or with different educational backgrounds. In other words, the concentration of the sample in terms of age and educational background may limit the applicability of the research results to a wider population.

Future research could expand the sample size and include participants with different ages and educational backgrounds to improve the representativeness and external validity of the research results.

In addition to the above, previous research has shown that people with more artistic experience have weaker direct emotional responses to artworks (Leder et al., 2014), but this pattern was not observed in this study. In this study, we used twelve abstract images. Future research could consider using different types of images to further explore whether artistic experience has a significant impact on emotional intensity. In addition, human-created and AI-created works could be analyzed separately to more clearly explore the impact of artistic experience in different creative sources.

Conclusion

This study provides theoretical and practical insights into how people evaluate AI-generated artworks. The results of this study show that when appreciating AI-generated artworks, people with more knowledge of art tend to perceive lower creativity. This result confirms to some extent that people with more knowledge of art have different evaluation patterns for artworks than those with less artistic experience (Leder et al., 2014). Future research can explore in depth the characteristics that affect the evaluation of creativity.

Taken together, this study provides evidence that artistic experience affects the creativity of AI artworks. In addition, general attitude towards AI does not moderate the relationship between the two variables, but it is also a factor that affects the evaluation of the creativity of AI artworks.

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Appendix A

Human-made pictures

Artwork 1

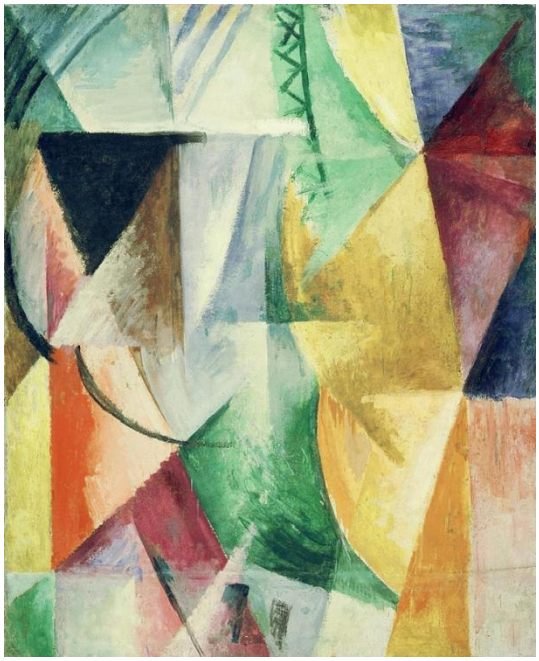
Sans titre (Composition brune II) by Youla Chapoval - Artvee. (o. D.). Artvee. https://artvee.com/dl/sans-titre-composition-brune-ii/#00

Artwork 2

abstract paintings - Abstract paintings Alessandro Tognin. (2023, 3. September). Abstract Paintings Alessandro Tognin. https://www.dreamsart.it/product/abstract-paintings/

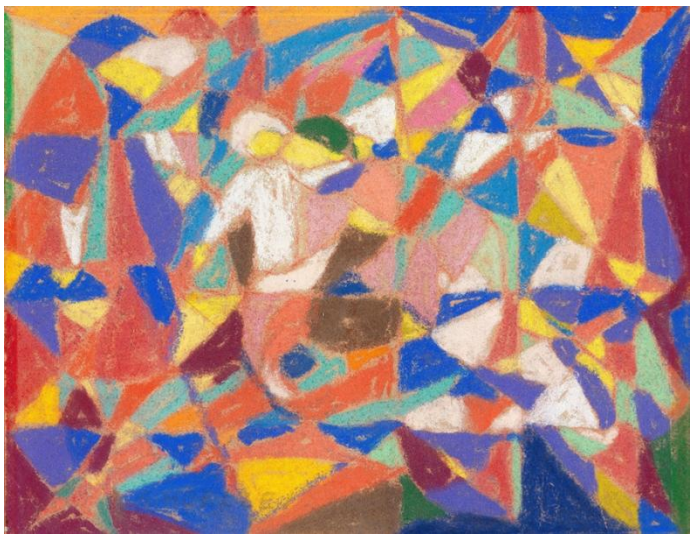
Artwork 3

Une fenêtre by Robert Delaunay - Artvee. (o. D.). Artvee. https://artvee.com/dl/une-fenetre/#00



Artwork 4

Figürliche Komposition by Adolf Hölzel - Artvee. (o. D.). Artvee. https://artvee.com/dl/figurliche-komposition/#00



Artwork 5

Anitra by Anonymous - Artvee. (o. D.). Artvee. https://artvee.com/dl/anitra/#00

Artwork 6

Komposition by Otto Freundlich - Artvee. (o. D.). Artvee.

https://artvee.com/dl/komposition-14/#0

AI Artworks

Artwork 1

Exploring Abstract Art with AI. (2024, 24. Juli).

https://deepdreamgenerator.com/blog/abstract-art-and-ai

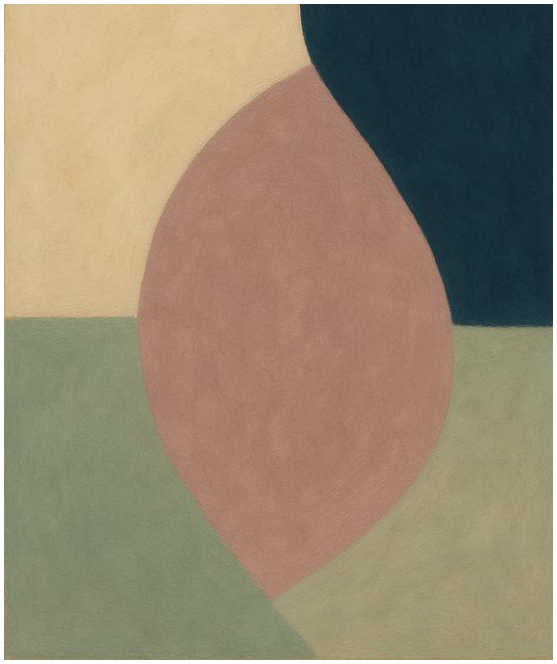
Artwork 2

Abstrakte Erdelemente auf Leinwand. (2025, 25. April). ChatGPT.

https://chatgpt.com/s/m_680b937d8b548191960f2c69fc085d2b

Artwork 3

Geometrische Abstraktion in Pastellfarben. (2025, 25. April). ChatGPT. https://chatgpt.com/s/m_680b9334cf0c819189fd5f1b73c92c39



Artwork 4

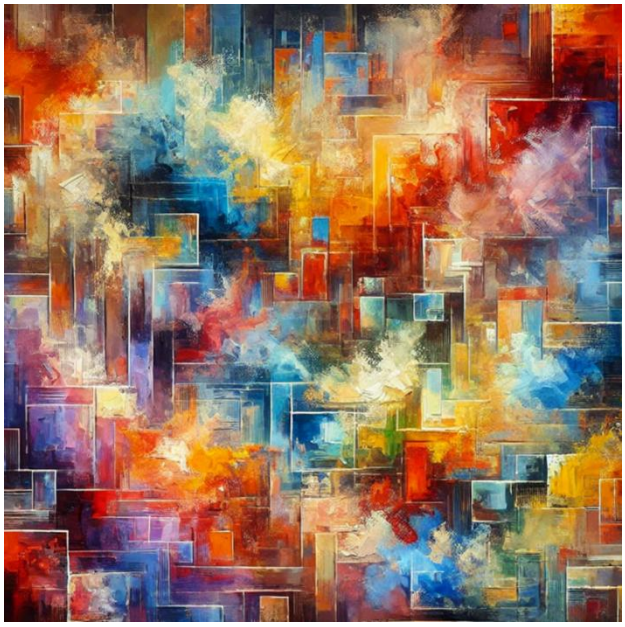
Exploring Abstract Art with AI. (2024, 24. Juli). https://deepdreamgenerator.com/blog/abstract-art-and-ai

Artwork 5

AI-generated abstract painting inspired by the sensation of drinking three espressos,.

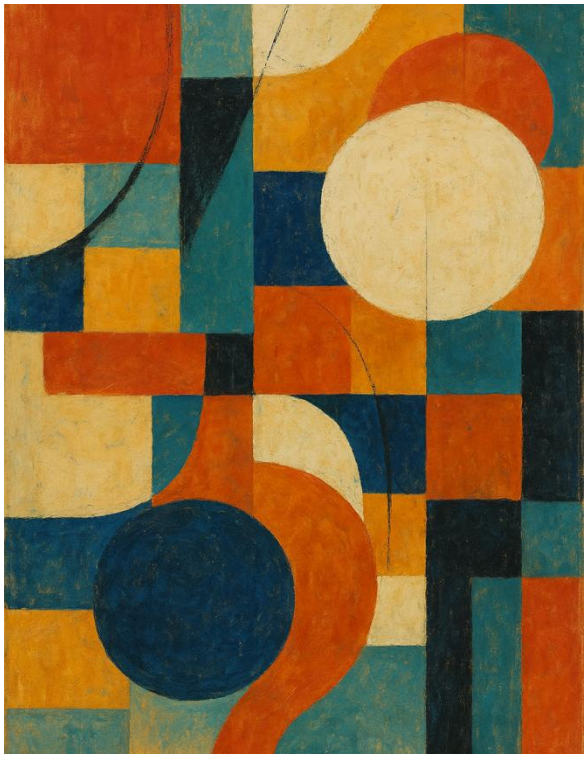
(2025, 7.April). DALL·E via ChatGPT.

https://chatgpt.com/



Artwork 6

Abstrakte geometrische Komposition mit Farben. (2025, 25. April). ChatGPT. https://chatgpt.com/s/m_680b926049d08191a564bb90dbfbf720



Appendix B

Artwork Descriptions

Positive Human Descriptions

HUM Description 1. "This artwork, created by a skilled artist, demonstrates mastery of technique and showcases years of experience and dedication to the craft."
"Dit kunstwerk, gemaakt door een getalenteerde kunstenaar, getuigt van zijn meesterschap in de techniek en van jarenlange ervaring en toewijding aan het vak."

HUM Description 2. "Each detail in this piece reflects the artist's refined expertise and distinctive approach, making it a truly unique expression of artistic vision."
"Elk detail in dit stuk weerspiegelt de verfijnde expertise en de unieke aanpak van de kunstenaar, wat het tot een werkelijk unieke uiting van artistieke visie maakt."

Negative Human Descriptions

HUM Description 3. "Despite being human-made, this artwork reveals the limitations of subjective interpretation, showing how even skilled artists can struggle with expression of their artistic vision."
"Hoewel dit kunstwerk door mensen is gemaakt, toont het de beperkingen van subjectieve interpretatie en laat het zien hoe zelfs getalenteerde kunstenaars moeite kunnen hebben met het uiten van hun artistieke visie."

HUM Description 4. "While created by hand, this piece reflects human biases and imperfections, highlighting how artistic vision is often constrained by personal and cultural influences."
"Hoewel dit kunstwerk met de hand is gemaakt, zijn er toch menselijke vooroordelen en onvolkomenheden in het werk te zien. Het laat zien hoe de artistieke visie vaak wordt beperkt door persoonlijke en culturele invloeden."

Neutral Human Descriptions

HUM Description 5 and 6. “This artwork is made by a human artist.”

”Dit kunstwerk is gemaakt door een menselijke kunstenaar.”

Positive AI Descriptions

AI Description 1. "This AI-generated piece demonstrates how technology is capable of artistic expression, creating intricate and thought-provoking visuals with precision and uniqueness."

"Dit door AI gegenereerde kunstwerk laat zien hoe technologie artistieke expressie mogelijk maakt door complexe en tot nadenken stemmende beelden te creëren met precisie en uniciteit."

AI Description 2. “Generated by advanced AI, this artwork pushes the boundaries, blending complex patterns and ideas beyond human imagination.”

"Dit kunstwerk is gemaakt met behulp van geavanceerde kunstmatige intelligentie (AI) en verlegt de grenzen door complexe patronen en ideeën te combineren die de menselijke verbeelding te boven gaan."

Negative AI Descriptions

AI Description 3. "This artwork, generated by AI, demonstrates that even the most advanced technology fails to inspire, revealing the mechanical nature of algorithms."

"Dit door AI gegenereerde kunstwerk laat zien dat zelfs de meest geavanceerde technologie niet kan inspireren en onthult de mechanische aard van algoritmes."

AI Description 4. "Despite being produced by advanced technology, this AI-generated piece highlights the absence of genuine human inspiration and artistic intent."

"Hoewel dit kunstwerk met behulp van geavanceerde technologie is gemaakt, benadrukt het de afwezigheid van echte menselijke inspiratie en artistieke intentie."

Neutral AI Description

AI Description 5 and 6. "This artwork is generated by AI."

"Dit kunstwerk is gegenereerd door AI."

Appendix C

Translations into Dutch

Beauty

"I find this work beautiful" - "Ik vind dit werk mooi"

A score of 0 = "strongly disagree" - "erg mee oneens"

A score of 100 = "strongly agree" - "erg mee eens"

Intentionality and Creativity

"In my opinion, the level of intentionality involved in the creation of this work is…" - "Naar mijn mening is het niveau van intentionaliteit dat betrokken is bij het maken van dit werk…"

"In my opinion, the level of creativity involved in the creation of this work is…" - "Naar mijn mening is het niveau van creativiteit dat betrokken is bij het maken van dit werk…"

A score of 0 = "very low" - "heel laag"

A score of 100 = "very high" - "heel hoog"

Aesthetic Fluency Scale

"I don't really know anything about this artist or term" - "Ik weet eigenlijk niets over deze kunstenaar of term"

"I'm familiar with this artist or term" - "Ik ben bekend met deze kunstenaar of term"

"I know a lot about this artist or term" - "Ik weet een hoop over deze kunstenaar of term"

General Attitudes toward Artificial Intelligence Scale

"Artificial Intelligence is exciting" - "Kunstmatige Intelligentie is uitdagend"

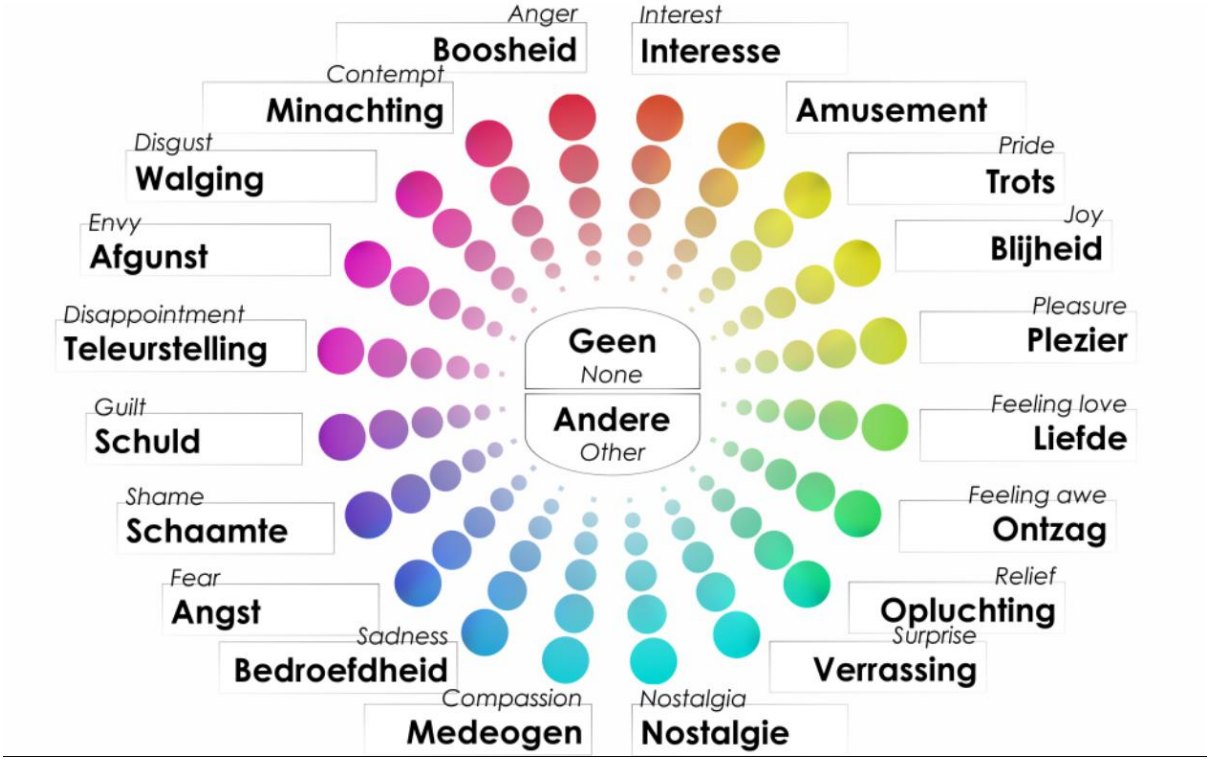
"I am impressed by what Artificial Intelligence can do" - "Ik ben onder de indruk van wat Kunstmatige Intelligentie kan doen"

"There are many beneficial applications of Artificial Intelligence" - "Er zijn veel nuttige toepassingen van Kunstmatige Intelligentie"

“I am interested in using artificially intelligent systems in my daily life” - “In mijn dagelijks leven ben ik geïntereseerd in het gebruik van Kunstmatige Intelligente systemen“

“Artificial Intelligence can have positive impacts on people's wellbeing” - “Kunstmatige Intelligentie kan een positieve impact hebben op het welzijn van mensen”

Appendix D


Anger
Boosheid
Interest
Interesse
Contempt
Minachting
Amusement
Disgust
Walging
Pride
Trots
Envy
Afgunst
Joy
Blijheid
Disappointment
Teleurstelling
Pleasure
Plezier
Geen
None
Andere
Other
Guilt
Schuld
Feeling love
Liefde
Shame
Schaamte
Feeling awe
Ontzag
Fear
Angst
Relief
Opluchting
Sadness
Bedroefdheid
Surprise
Verrassing
Compassion
Medeogen
Nostalgia
Nostalgie

Appendix E

Figure 1

Residuals versus predicted values plot for Model 1.

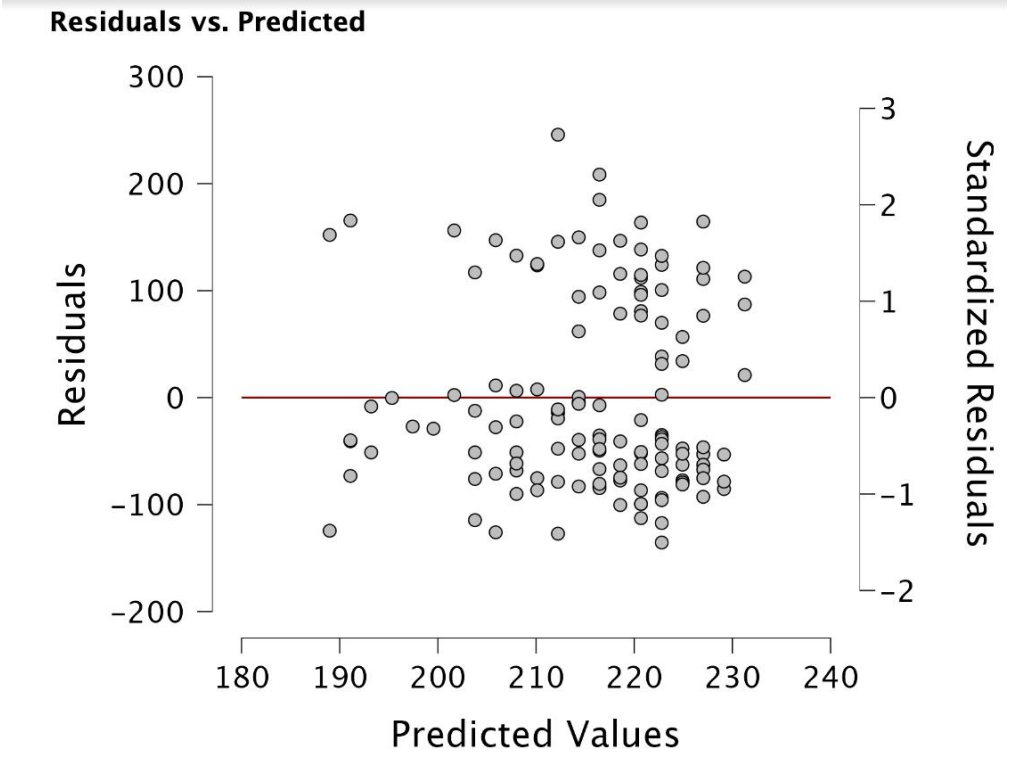


Figure 2

Histogram of standardized residuals for Model 1.

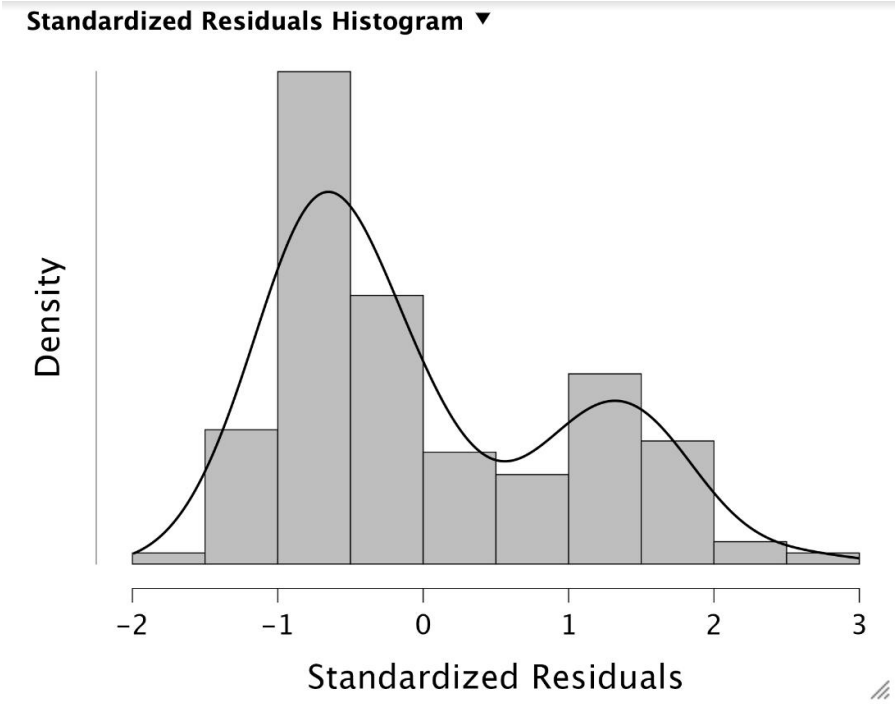


Figure 3

Q–Q plot of standardized residuals for Model 1.

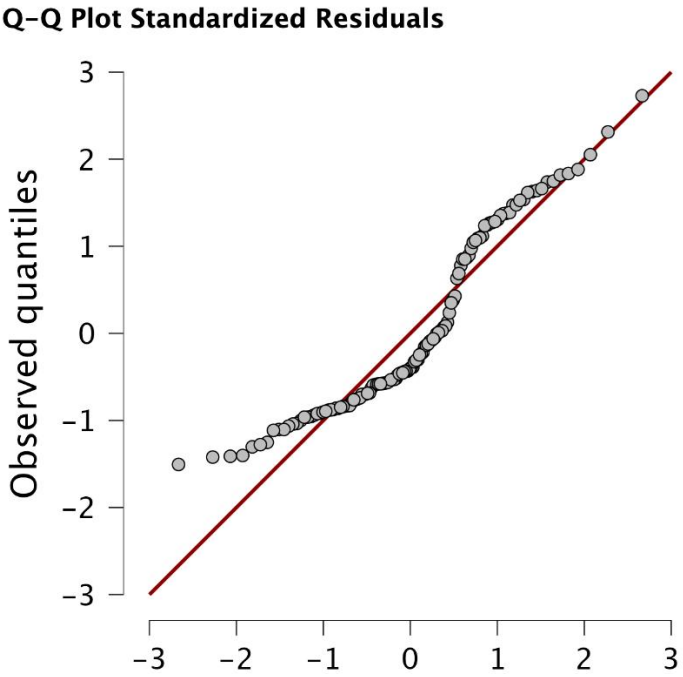


Figure 4

Histogram of standardized residuals for Model 2.

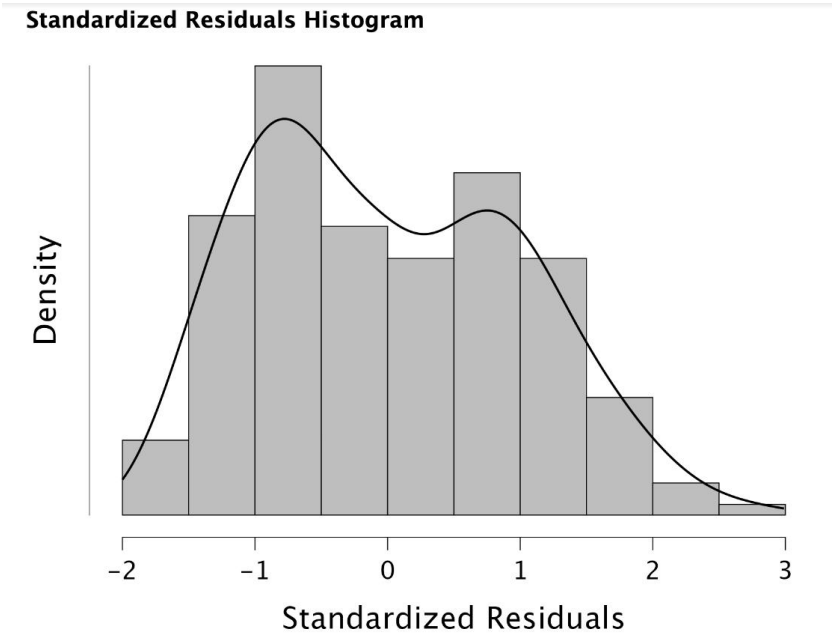


Figure 5

Q–Q plot of standardized residuals for Model 2.

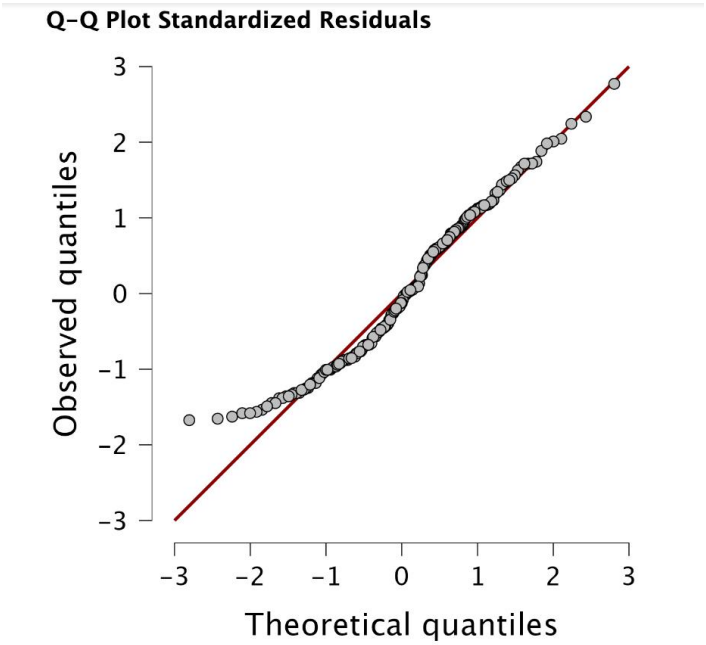


Figure 6

Residuals versus predicted values plot for Model 2.

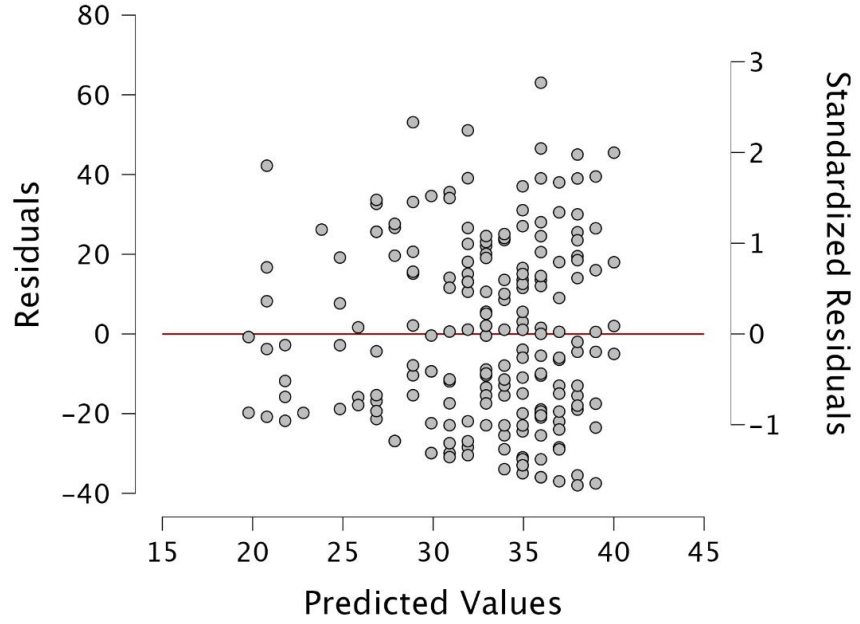


Figure 7

Residuals versus predicted values plot for Model 3.

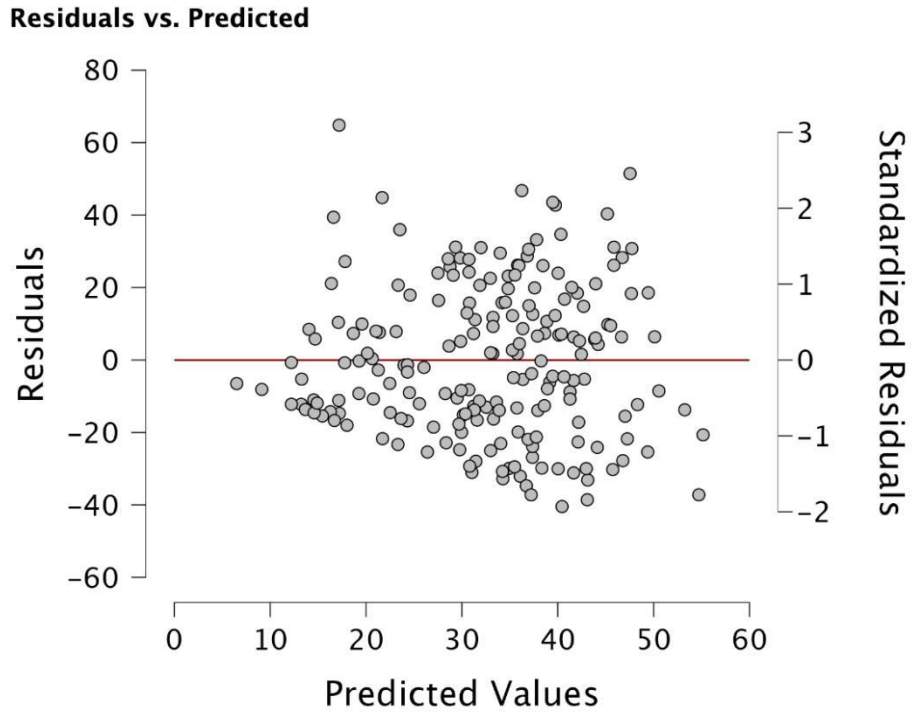


Figure 8

Histogram of standardized residuals for Model 3

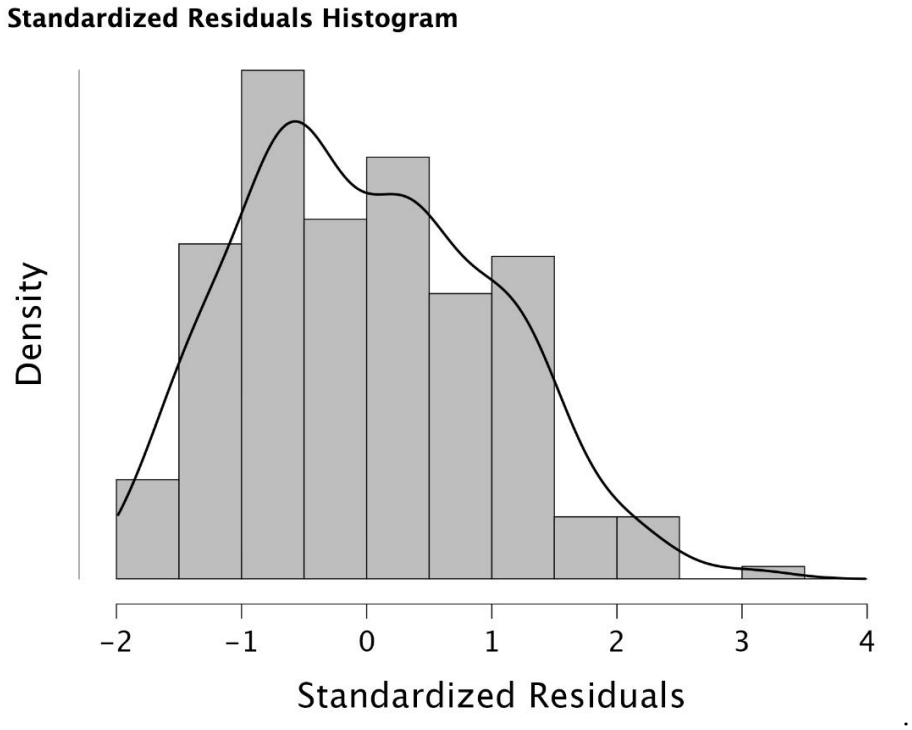


Figure 9

Q–Q plot of standardized residuals for Model 3.