Art Affinity Index: An Instrument to Assess Art Relation and Art Knowledge

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Abstract

The interplay of knowledge and art perception has been investigated over the past decades in various disciplines such as art sociology and aesthetic education. We present a brief overview of methodological approaches that investigated the effect of knowledge and expertise on the perception and appreciation of art. We then describe in detail the construction of the empirically grounded Art Affinity Index (AAI), which was formulated using exploratory factor analysis of questionnaire data received from 288 visitors to a fine arts museum in Switzerland. Subsequent confirmatory factor analysis in 289 other visitors showed the reliability and stability of the two AAI factors: Art relation and Art knowledge. The AAI was found to possess satisfactory validity and correlated meaningfully with visitors' age and gender. These psychometric properties suggest the AAI is a convenient measure of art affinity. It provides a useful instrument for researchers in art sociology, visitor studies, and empirical aesthetics.

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The relationship between an artwork and its viewer is at the core of art research. With respect to this relationship, one may focus on attributes of the artwork, on the act of perceiving artworks, or on attributes of the viewer. In this project, we addressed the latter question, which has been tackled by various disciplines over several years: What attributes of the viewer are particularly relevant for illuminating his or her relationship to an artwork? Initially, we will briefly introduce the questions asked, and the methods used in the fields of empirical aesthetics, cultural sociology, and aesthetic education to address them. The models established by various authors span from aesthetic competence and aesthetic fluency through experiencing, to more phenomenological approaches of aesthetic understanding. Subsequent to, and based on this overview, we will introduce our empirical formulation of an Art Affinity Index (AAI) and provide details of its psychometric properties.

Bourdieu and Darbel (1991) developed their influential model of the art viewer on the relationship between the viewer's knowledge and his or her art appreciation. This socially determined "educated taste" puts the viewer in a position to properly perceive artworks. At present, Bourdieu and Darbel's model is the most influential sociological approach to art mediation and appreciation (Schwarz, 2013). Bourdieu and Darbel based their model on empirical data that originated from various museum studies. For data collection, they used different questionnaires, which also contained socioeconomic items such as age, gender, income, occupation, and qualification of the visitors. Museum visitors were asked about their motivation to visit the museum and their estimation of the museum and the presentation of artworks. The duration of visitors' tours was estimated. Bourdieu's art sociology assumed that artworks carry a code, which can be decoded and understood (Bourdieu, 1970). Knowledge about artists, artworks, and styles contribute decisively to a recipient's art competence. The higher the art knowledge, the more a viewer will be able to enjoy an artwork. Bourdieu and Darbel's volume *The Love of Art* (first published in 1966), where the aforementioned theories originated, has since become a quantitative social research classic.

Other authors investigated the correlation of knowledge and art appreciation with a less socioeconomic focus. They addressed the impact of expertise, knowledge, and art training on aesthetic appreciation—this research issue constituting one of the major problems studied in empirical aesthetics and aesthetic education.

Smith and Smith (2006) introduced an "aesthetic fluency" scale to measure art expertise with a knowledge-based approach. In a noteworthy project, the authors studied 400 visitors of The Metropolitan Museum of Art. Ten items referred to artists and art ideas, which were presented to the visitors as a list: Mary Cassett, Isamu Noguchi, John Singer Sargent, Alessandro Botticelli, Gian Lorenzo Bernini, Fauvism, Egyptian Funerary Stelae, Impressionism, Chinese Scrolls, and Abstract Expressionism. Respondents indicated their respective

knowledge of these artists and concepts in art on a 5-point scale ranging from 0 to 4: "I have never heard of this artist or term," "heard but don't really know anything," "(...) vague idea (...)," "I understand (...) when discussed," to "I can talk intelligently about this artist or idea in art." The authors' premise was that "aesthetic fluency is the knowledge base concerning art that facilitates aesthetic experience in individuals" (p. 50). Aesthetic fluency may be acquired through direct instruction, but also through experience in galleries and art museums, or by reading about art. For Smith and Smith, aesthetic fluency is a key to understanding why artworks are appreciated. Empirically, they found in a factor analysis that the 10 items loaded on two factors, but, based on Cronbach's alpha values, decided that there was likely only one factor of aesthetic fluency. The items used were quite heterogeneous: the item Impressionism was rather well known on average (mean ratings, 3.1), but many of the items were unknown to the large majority of respondents, with means below 1.5 (approximately 1.2 for the item Chinese Scrolls, 1.3 for the American sculptor Isamu Noguchi, Fauvism, and the architect Gian Lorenzo Bernini). In other words, at least half of Smith and Smith's items showed high item difficulty, and the average respondent professed to have less than a "vague idea" of these items. A further point of critique is that the scale confounds art knowledge with the ability to "talk intelligently about this artist or idea in art," which is an interactional capability going beyond one's basic knowledge of an artwork. Smith and Smith found their measure of aesthetic fluency positively linked to age, participants' number of museum visits, art training, and education. Gender of visitors was not reported.

This knowledge-based approach to art reception relates closely to Bourdieu and Darbel's "compétence artistique." According to this approach, art appreciation is elicited via understanding. Silvia (2007) tested the model developed by Smith and Smith (2006) by assessing the "Big Five" basic personality traits in university students. He found that the personality trait "openness to experience" was significantly correlated with art fluency, whereas the other personality traits and fluid intelligence were not. Silvia (2006) also investigated the correlation of artistic training and interest in visual art. In a study with 50 undergraduate students (42 women and 8 men, all from a general psychology class), he found that "people high and low in training make the same emotional appraisals of art, but they reach different answers to the appraisal questions" (p. 139) and that "...people with art training found complex pictures more interesting, and they appraised them as easier to understand" (p. 139).

Intending to assess aesthetic experiences in general, but also with a focus on art knowledge and its relation to the rating of paintings, Hager, Hagemann, Danner, and Schankin (2012) developed and tested the Art Reception Survey in a sample of 147 psychology students and 47 freely recruited participants. Most participants were female. From an initial item pool of 76 items, they established a version with 29 items, which loaded on six factors of aesthetic appreciation.

One factor was expertise. They found that participants knowledgeable in art were able to relate to the artist, the painting's historical background and the meaning of the painting "beyond the depicted content of the artwork."

Leder, Gerger, Dressler, and Schabmann (2012) investigated two groups in a sample of psychology students ($n = 136$), who showed either high or low levels of art expertise. The students rated 24 artworks (classical, modern, and abstract paintings) online, according to their emotional valence, arousal, feeling of comprehension, and liking of the artwork. According to the authors, "experts and nonexperts not only revealed strong effects of emotion in all conditions, but also confirmed that the intercorrelations between emotion and understanding were consistently higher for nonexperts. Secondly, experts generally provided higher ratings on nearly all scales" (p. 2). The same results—nonexperts rating paintings rather in accordance with their emotions and individual experience and experts rating paintings in accordance to stylistic attributes—were also attained by Augustin and Leder (2006), who used a sorting method: Students had to split a set of paintings according to characteristics they considered important for the categorization of these artworks.

Additional research instruments have been implemented to focus on the development of aesthetic experience (Parsons, 1989), for example, based on interviews with school children (Housen, 1992). Recently, art expertise is increasingly explored by neurobiological methods. In an evoked response electroencephalography study, Pang, Nadal, Muller-Paul, Rosenberg, and Klein (2013) reported electrocortical correlates of art expertise: Astonishingly, the response amplitudes were smaller in more experienced viewers, which the authors interpreted as a sign of higher efficiency of cognitive processing in their (undergraduate) experts.

In summary, the discourses in art sociology, art psychology, and art pedagogy reveal a considerable and ongoing interest in the effects of art knowledge and expertise on art reception. Published data suggest that concepts of art knowledge may be related to, and predictive of, a number of key aspects of art appreciation in viewers. It should be noted, however, that in studies of art knowledge, many different concepts have been employed due to the use of multiple methods and instruments, owing to the fact that differing disciplines and research interests have focused on this issue. A great variety of methodological approaches—quantitative and qualitative surveys, experiments, and physiological recordings—were used. Comparisons across studies are therefore difficult to make. In addition, in several studies, the differentiation of artistically naïve and artistically experienced participants was based on small samples, which were not representative because they originated exclusively from university student populations. Only few studies included actual museum visitors (Bourdieu and Darbel, 1991; Mastandrea, Bartoli, & Bove, 2007; Smith & Smith, 2006).

We concluded from this state of research that more emphasis should be put on the development of an instrument to estimate viewer's expertise and

knowledge in art reception. The existing art fluency scale was used as a valuable source of inspiration, but we concluded that improvements were necessary for assessing art affinity among museumgoers in central Europe. Our goal was therefore to develop and present a psychometrically sound instrument that may be used as a standard measure of art affinity for subsequent studies (Tröndle & Tschacher, 2015). We therefore decided to develop a new instrument (i.e., AAI) within the context of the large-scale research project *eMotion—mapping museum experience*. We aimed at defining Art affinity as including, beyond art *knowledge*, further aspects of a visitor's specific *relation* to art. Here, we will introduce the AAI by describing its factorial structure as investigated by an exploratory factor analysis (EFA) of 288 representative museum visitors. We will then apply confirmatory factor analysis (CFA) to test the reliability of this structure in a different sample of visitors of the same museum and report the association with demographic data and indicators of validity.

Method

Participants

The context of the present psychometric study was the *eMotion* project, which focused on the measurement of physiological signals, aesthetic preferences, and the continuous spatial mapping of visitors in a museum exhibition (Tröndle, Greenwood, Kirchberg, & Tschacher, 2014a; Tröndle, Kirchberg, & Tschacher, 2014b; Tschacher et al., 2012). The *eMotion* research project included visitors who, during a determined period of time (June–August 2009), entered the exhibition *11: 1 (+ 3) = Elf Sammlungen für ein Museum* [Eleven Collections for One Museum] in the fine art museum St. Gallen, located in Switzerland. The research project covered the museum's entire ground floor. A parallel exhibition was installed on the second floor.

   In the ticket-desk area, individual visitors and small groups of up to six people, of at least 18 years of age and fluent in German or English, were invited to participate in the research project. Members of guided tours and nonadults were excluded from participation for logistic reasons and because minors cannot give independent informed consent. Data acquisition for the present psychometric project was possible from 577 visitors (61.6% female; mean age 45.9 years), that is, approximately 70% of all adult nongroup visitors of the museum in the study period. Fifty-three percent of these visitors attended the exhibition in the company of other persons. In a survey among visitors participating and visitors not willing to participate in the study, we found no indications of bias in the studied sample (see Tröndle et al., 2014a). We therefore consider the included group of participants as representative of the entire adult visitor population of this museum.

   The museum was chosen as research site because it represents a middle-sized museum with an international collection of fine art, which is typical for many

museums of this size in central Europe. The fine art museum St. Gallen has an extraregional or national reputation: 40.9% of the participants came from the canton of St. Gallen, 33.3% were from other parts of Switzerland, and 25.8% from abroad. The studied sample of visitors thus represents not only the local visitor population but also visitors of other fine art museums in Switzerland and neighboring countries.

Materials and Procedure

The exhibition of approximately 70 artworks loosely followed an art-historical path, ranging from Impressionism to Contemporary Art. All of the exhibited artworks stemmed from the collection of the museum. Featured artists included Claude Monet, Max Liebermann, Ferdinand Hodler, Giovanni Giacometti, Max Ernst, Fernand Léger, Paul Klee, Max Bill, Günther Uecker, Andy Warhol, Roy Lichtenstein, James Rosenquist, Imi Knoebel, and On Kawara, among others. Participants could view paintings, drawings, sculptures, and installations.

Visitors completed a standardized survey before they entered the exhibition; all items were provided on a computer screen, and the participants were guided through the survey by a research assistant. A further survey of visitor experiences was carried out subsequent to the visit. In addition to sociodemographic items, the entry survey contained questions relating to visit motivation, attitudes, and expectations of art exhibitions as well as general knowledge of art. The exit survey contained questions relating to individual visitor behavior, the experience in the exhibition (analogous to the expectations addressed in the entry survey), and the evaluation of single artworks. For the construction of the art affinity instrument, we operationalized art affinity as art competence together with motivational and objective components; therefore, we addressed the concept of art competence following Bourdieu and Darbel (1991), together with the interest in and relationship to art in general, and the fact of working professionally in the art field. This assessment was based on seven self-report items of the entry questionnaire.

Five items concerned art knowledge: Taeuber-Arp represented an *artist*; Futurism and Minimal Art represented *art styles*; Campbell's Condensed Tomato Soup (A. Warhol) and Eléments mécaniques (F. Léger) two well-known *artworks* that were exhibited in the museum. The scale for the assessment of each of these five knowledge items ("How well do you know the following artists, artworks, and styles?") allowed one of three responses, $3 = I$ *know … well*, $2 = I$ *know … a little*, or $1 = I$ *do not know.* …A 4-point item addressed the visitor's relationship to art: "How do you assess your personal relation to art?" Responses were given using a 4-point scale: $1 = I$ *am not especially interested in art*, $2 = I$ *am interested in art*, $3 = I$ *have a strong interest in art*, and $4 = I$ *have a profound/professional interest in art*. One item was a

dichotomous question for the self-report of visitors working professionally in the art field: $1 = no$ and $2 = yes$.

EFA and CFA. For the development and testing of AAI, we implemented a standard psychometric procedure that is used when questionnaires are constructed. This procedure consists of factor analyses of large datasets (e.g., Child, 2006). The datasets are constituted by the sample data of participants who have responded to all items under consideration. Factor analyses can determine the correlations among these items. In an initial exploratory step, EFA is used to propose the correlative patterns of the items of the dataset, its factorial structure; a subsequent step is CFA, by which this structure is tested and, if adequate, confirmed.

EFA was conducted on the data of the initial half of the complete sample, which included 288 visitors. The seven items specified earlier underwent factor analysis using maximum likelihood estimation with oblique rotation (quartimin), that is, the resulting factors were allowed to correlate. The statistics software used in this analysis was JMP 10 for the Macintosh (SAS Institute Inc., 2012). CFA was then run in order to evaluate, on the basis of 289 further visitors of the second half of the sample, the adequacy of the factorial structure found in the EFA. It was performed using Mplus 6 (Muthén & Muthén, 2010), a statistical package commonly used for structural equation modeling. A robust weighted least squares estimator was computed, which provides probit regression coefficients. Accuracy of the model fit was tested with four fit indices: the chi-square, the Tucker Lewis index (TLI), the root mean square error of approximation (RMSEA), and the comparative fit index (CFI). The fit of the models was evaluated using the following cutoffs indicating a good fit: RMSEA ≤ 0.08, TLI ≥ 0.90, and CFI ≥ 0.90; in other words, we implemented the standard procedure for the assessment of rating scales (Brown, 2006; Marsh, Hau, & Wen, 2004; for an exemplary application in scale construction, see Bergomi, Tschacher, & Kupper, 2013). Two models were tested: (a) a single-factor model in which one overall factor (dimension) directly accounts for the variance of all items used to construct art affinity; (b) a two-factor model representing the factor structure found in the EFA and in which the factors are allowed to freely correlate with one another. These models were then compared by means of the chi-square test.

Assessment of validity. Social desirability effects, hence reduced validity, may occur in the answering of the knowledge questions (Hawthorne effect; see, Roethlisberger & Dickson, 2003). We tested this tendency toward overrating art knowledge by an additional item with the name of a nonexisting artist: Pitlinsky. In consideration of the relatively long questionnaires and the technical setup also containing physiological devices of the *eMotion* project, we also tested reactivity (internal validity). We investigated the potential impact of all data

acquisitions occurring in the project by comparing two groups of visitors, one with complete measurement ($n = 552$) and the other without ($n = 24$).

Results

Exploratory Factor Analysis

The number of factors in EFA was set to two, which was consistent with Kaiser's criterion of retaining factors with an eigenvalue >1. The resulting factor loadings are displayed in Table 1.

All items could be clearly assigned to one of the two factors, which we labeled Art relation and Art knowledge, respectively. Factor 1, Art relation, explained 33.2% of the variance of the items. It stands for a visitor's self-reported interest and relationship to art, which may be expressed in a visitor working professionally in the art field. Factor 2, Art knowledge, explained 29% of variance and indicates the extent to which a visitor is familiar with artworks, styles of art, and artists. Art relation and Art knowledge were significantly correlated (Pearson's $r = .58$, $df = 287$, $p < .001$).

Confirmatory Factor Analysis

As expected, the single-factor model showed a poor fit (RMSEA $= 0.14$; TLI $= 0.86$; CFI $= 0.91$; chi-square $= 90.20$, $df = 14$, $p < .001$), which is in line with the findings from the EFA. This indicated that the structure underlying the seven items of art affinity is not one dimensional. The two-factor model, however, yielded good results (RMSEA $= 0.07$; TLI $= 0.96$; CFI $= 0.98$ chi-square $= 31.48$, $df = 13$, $p < .01$), as well as a significantly lower chi-square

Table 1. Factor Loadings of Exploratory Factor Analysis ($n = 288$).

Item	Factor 1 Art relation	Factor 2 Art knowledge
Taeuber-Arp	0.184858	**0.400434**
Futurism	0.044750	**0.616323**
Campbell's Condensed Tomato Soup	−0.016120	**0.589324**
Minimal Art	0.015824	**0.739338**
Eléments mécaniques	−0.072658	**0.561003**
Profession in the Art Field	**0.905607**	−0.037257
Relation to Art	**0.960210**	0.075510

Note. Loadings exceeding 0.40 appear in bold.

value (chi-square diff $= 58.72$, $df = 1$, $p < .001$), which supported the two-dimensional structure of the data. In this two-factor model, standardized regression weights (Table 2) showed a similar loading pattern as in the EFA. The correlation between the two factors was $r = .66$, $df = 286$, $p < .001$.

The factorial structure found in the first split-half sample of visitors was thus confirmed in the second split-half sample. This supports the reliability of the AAI and indicates that a two-factor formulation of art affinity consisting of Art relation and Art knowledge is a satisfactory solution.

After CFA was performed, we constructed the AAI factors, Art relation and Art knowledge, for the complete sample of 577 visitors, using the factorial structure that resulted from the EFA described earlier. A small number of missing item values (less than 1%) was considered by using the imputation function of JMP 10. Thus, the factor scores of art affinity are available for all 577 visitors for the tests in the following as well as for future analyses. The means of the single art knowledge items ranged between 1.63 (Eléments mécaniques) and 2.46 (Campbell's Condensed Tomato Soup) on a scale between 1 and 3.

Associations of the AAI With Visitor Variables

We analyzed the relationship between the AAI and gender as well as the age of visitors. Art affinity was not significantly different in male and female visitors. Using analysis of variance with the *F*-test statistic, for Art relation there was a trend toward higher scores in females, $F(1, 568) = 2.92$, $p = .09$. In turn, there was no gender difference in Art knowledge scores, $F(1, 568) = 0.12$, $p = .73$. The correlation of age with art affinity was not significant for Art relation ($r = 0.02$, $df = 572$, $p = .64$) but positive and significant for Art knowledge ($r = 0.27$,

Table 2. Standardized Probit Regression Weights in Confirmatory Factor Analysis ($n = 289$).

Item	Factor 1 Art relation	Factor 2 Art knowledge
Taeuber-Arp		0.63*
Futurism		0.69*
Campbell's Condensed Tomato Soup		0.64*
Minimal Art		0.79*
Eléments mécaniques		0.66*
Profession in the Art Field	0.99*	
Relation to Art	1.00*	

Note. Significance level: *p < .001.

$df = 572$, $p < .0001$). This is a replication of one of Smith and Smith's (2006) findings.

Validity of the AAI

We assessed the correlations of the AAI with external criteria such as the visitors' frequency of museum visits in the previous year, an item of the entrance questionnaire. Correlation to this item may be used as an indicator of external validity. Visitors reported a median of 7 (range 0–200) annual museum visits, excluding the present visit. This variable had a nonnormal, skewed distribution, which suggests using Spearman's correlation. Frequency of museum visits was significantly correlated with both art affinity factors (Art relation: $r = .27$; Art knowledge: $r = .64$; both $df = 573$, $p < .0001$). This finding is again in line with previous research (Smith & Smith, 2006).

The reason of the present museum visit was described by a further item of the entrance survey, which depicted the primary reason of the museum visit as follows: "What was the reason for your visit here today?" with possible answers $1 = art\text{-}related\ reason\ of\ visit$ and $0 = other\ reason\ of\ visit$. Into Category 1 we collapsed various art-related causes for the present exhibition visit such as "because of a specific artist," "a specific artwork," "this fine art museum," and "general interest in art." Category 0 contained all visit reasons unrelated to art, such as "because of my companion" (cf. vom Lehn, Heath, & Hindmarsh, 2001), "as a tourist activity," and so on. Logistic regression of the AAI on 'reason for visit' was significant (chi-square = 35.4, $df = 2$, $p < .0001$). However, only Art knowledge was explanatory (chi-square = 31.6, $df = 1$, $p < .0001$). Art relation was not significantly related to 'reason for visit' (chi-square = 2.9, $df = 1$, $p = .09$).

The AAI was based on items presented in an interview-like survey. Social desirability effects may be intensified by the interview situation and are particularly evoked by knowledge questions. This tendency toward overrating art affinity may compromise construct validity. The responses to the Pitlinsky item were as follows: 2.8% of all visitors responded that they knew the (nonexisting) artist Pitlinsky well, another 8.3% knew the artist Pitlinsky "a little," and 88.9% correctly said they did not know Pitlinsky. We found that the tendency to underlie the social desirability bias was enhanced in visitors with higher art affinity: Especially Factor 1, Art relation, was positively associated with counterfactual knowledge of the artist Pitlinsky, $F(1, 564) = 12.02$, $p < .0001$; the same was true, to a lesser extent, for Art knowledge, $F(1, 564) = 4.92$, $p < .01$.

Reactivity (internal validity) refers to the potential impact of all data acquisitions occurring in the project. The group with complete physiological and other measurement ($n = 552$) and a group of visitors without monitorings ($n = 24$) were compared. Variance analyses were computed in order to determine whether data acquisition per se biased visitors' responses. Among 12 items

addressing visitors' experiences (such as "The exhibition … was thought pro-voking/was entertaining/let me experience beauty," etc.), one significant difference was found. The group with complete measurement had a higher level of "The exhibition opened and alerted my senses," $F(2, 574) = 4.01$, $p < .05$. In sum, the influence of extensive data acquisition on the survey had insignificant to small effects (Tröndle et al., 2014a; Table 1).

Discussion

In the present psychometric analysis, we developed the AAI, an instrument to assess the art affinity of museum visitors. AAI was found to consist of two factors, Art relation and Art knowledge. Art relation measures the relationship with, and inclination toward, fine art; Art knowledge quantifies self-reported knowledge of modern art, naming artworks, styles of art, and artists.

This factorial structure was found psychometrically satisfactory and stable in the confirmatory factor analysis we conducted and was superior to a one-factor solution of art affinity. Art relation and especially Art knowledge were correlated with the number of annual museum visits reported by the participants, which supported the external validity of the construct. Consistent with this, Art knowledge was significantly elevated in participants reporting that their prime motivation for the present museum visit was the exhibited art. Art affinity in both of its factors was not significantly different between male and female participants, indicating that the construction of AAI was not confounded by gender. Neutrality with respect to gender is an important asset in applications of this instrument. Art relation was independent of the age of the participants, whereas Art knowledge was higher in older persons. This is again a convenient feature of the AAI, which differentiates between the general inclination toward art (which is uncorrelated with age) and the knowledge acquired of art, which should be more pronounced in later life. These analyses suggest that the present instrument provides very reasonable psychometrics: Its factorial structure spans two dimensions, both of which were found to be reliable and stable. The external validity of the construct of art affinity was established with respect to long-term visitor behavior and current motivation for visiting the art exhibition. In sum, AAI allows measurement in the psychological sense, that is, measurement of art affinity by self-report of the participants. Thus, AAI delivers quantitative data based on a participant's subjective assessment; at the same time, this subjective information was valid and reliable. All these aspects together make AAI a suitable instrument for a variety of practical and research applications in museums and galleries.

We found, however, that persons with high self-reported art affinity tended to overestimate their own art affinity by disproportionately claiming knowledge of the nonexisting artist Pitlinsky. This speaks for the presence of a social desirability bias and constitutes a limitation to internal validity. Yet only a minority

of about 10% of participants appeared to be vulnerable to this bias; a simple method to minimize this validity problem would be to measure AAI outside an interview-like survey, for example, by anonymous self-declaration not in the presence of an observer. Second, similar to the studies of Bourdieu and Darbel (1991), Smith and Smith (2006), and Mastandrea et al. (2007), we gathered empirical data in museums, and no control group of non-museum visitors was included. Art relation and Art knowledge are therefore defined only for fine art museum visitors, which may limit the generalizability of the constructs. Third, a further deliberate constraint is that AAI is based on self-report items only; additional analyses of the link between AAI and objective data such as behavioral and physiological variables are reported elsewhere (Tröndle & Tschacher, 2015). This is also where we expect the main utility of AAI to be, namely as an easy-to-use instrument for quantitative research, either basic or practice inspired, on sociological, educational, and psychological questions of art reception and appreciation. Finally, a caveat of scale construction is to avoid or foresee biases that may be introduced by the content and wording of items. For example, our present items may possess some regional bias, as we used two artworks that were known to be exhibited in the museum the visitors were about to enter. We correspondingly suggest viewing the two items Eléments mécaniques and Campbell's Condensed Tomato Soup of AAI as potential "wildcards," to be potentially substituted by artworks shown in the respective gallery-of-interest of future research or application.

The benefits of the AAI are that it was developed in a representative sample of common museum visitors under field conditions, that is, outside the psychological laboratory and not based on university students. Ease of use was corroborated by the parsimony of the assessment accomplished on the basis of only seven self-report items. The two AAI factors constitute a reliable and gender-neutral ground for further investigations in the field of art sociology, pedagogy, and empirical aesthetics. With this instrument, the influence of art affinity on art reception can be analyzed in manifold ways. It may be used for investigations of the linkage between art affinity and aesthetic experience, art-related physiological responses, behavior inside the exhibition, and further variables of art reception and art appreciation.

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Declaration of Conflicting Interests