

Gender-related effects of music listening on aesthetic appreciation of visual artwork

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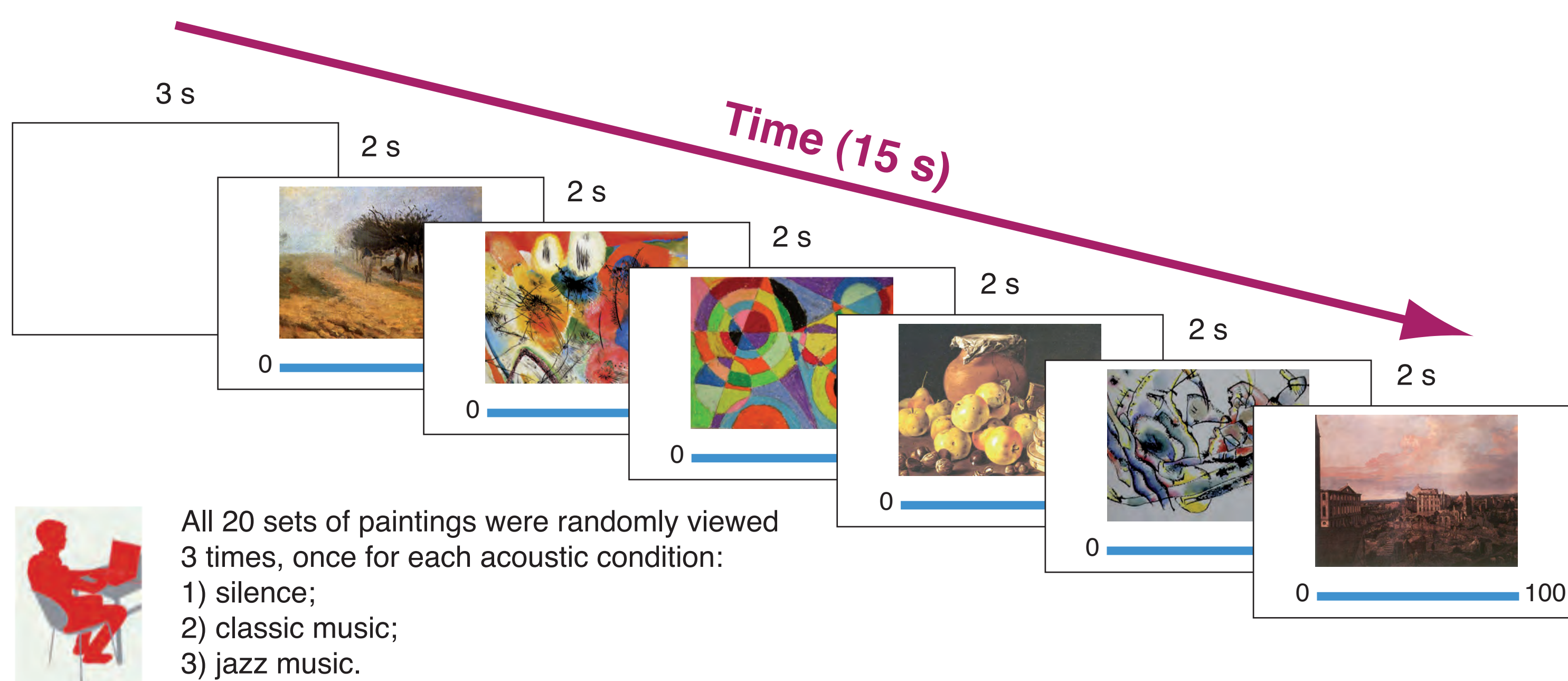
Introduction. In general terms, common sense tells us that classic music is a better fit for figurative artworks than jazz or “modern” (XXth century) classic music. It therefore appears reasonable to assume that admiring a painting while listening to music that matches in style the painting should increase its aesthetic appreciation. Past research has already focused on similar issues. In particular, Parrott (1982) reported additive effects of music and paintings on emotional judgements, however with a higher impact of paintings on music than vice versa. Limbert and Polzella (1998), instead, attempted to match paintings and music styles, finding that, with regards to paintings, matching music affected the level of aesthetic appreciation of paintings. However they also noticed that impressionist music incremented the appreciation of all paintings regardless of their style. While no gender effects were reported in their work, Polzella (2000) reported gender differences in painting appreciation related to artistic style, but not in relation to the simultaneous presentation of music and paintings. Finally, Koning and van Lier (2013) conducted a study in which they matched landscapes by William Turner to classical music and abstract paintings by Wassily Kandinsky to jazz, finding that matching music affected positively the aesthetic appreciation of both painting styles. No gender effects were reported.

We here present a preliminar study – part of a larger project intended to investigate the interaction between music and visual art on the aesthetic experiences that arise from such domains of artistic expression – in which we tested the effect of music genre on the aesthetic appreciation of paintings that were either figurative or abstract.

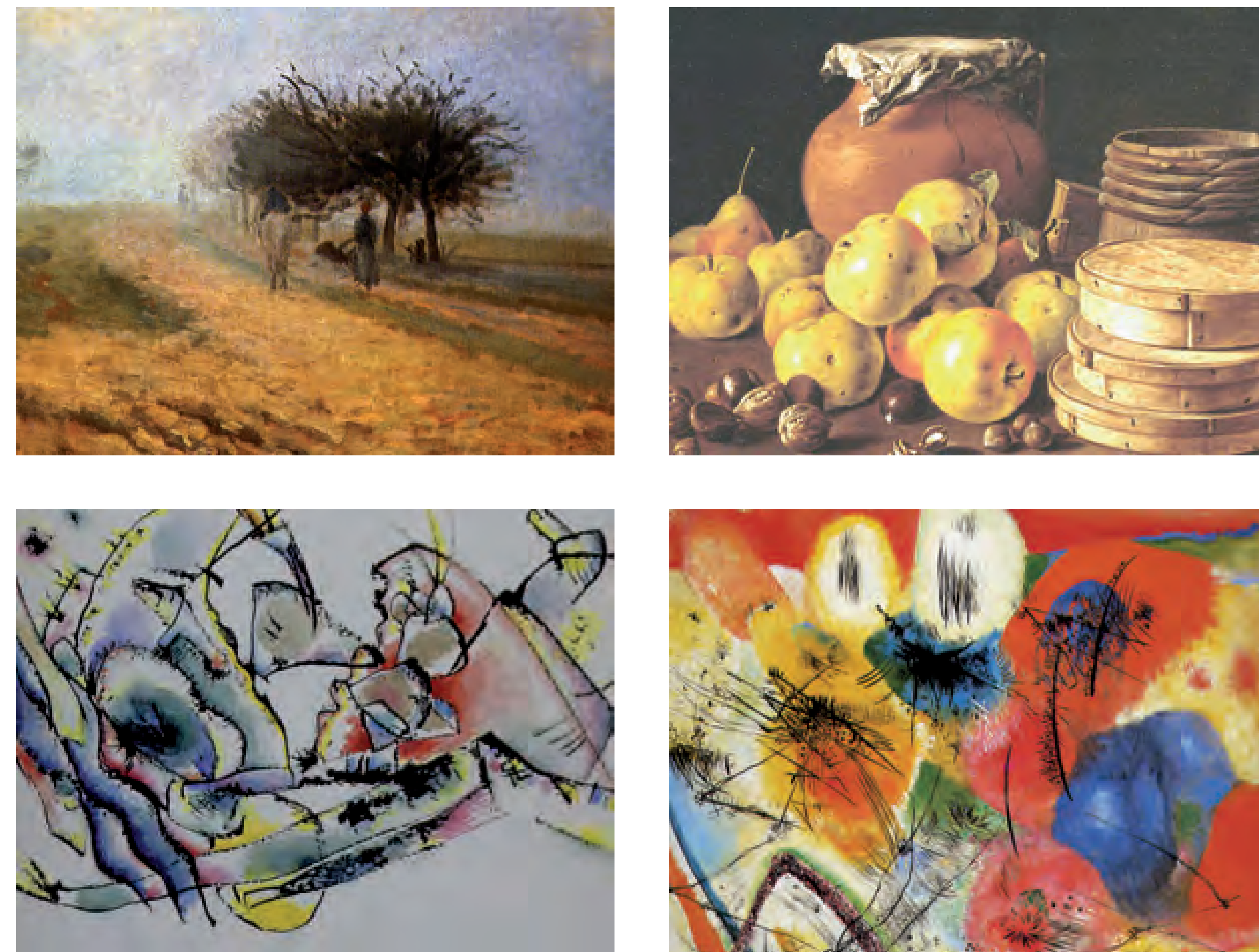
Participants. Thirty participants (15 males; mean age = 22.33, SD = 2.34), all right-handed (Oldfield, 1971) took part in the experiment. All had normal or corrected-to-normal vision and no auditory problems. None of the participants had specific background in fine art or was a musician.

Stimuli. *Pictorial stimuli* consisted of 120 reproductions of paintings similar to those used in a previous work (Cela-Conde et al., 2004, 2009): 60 figurative (impressionist, post-impressionist and realistic style) and 60 abstract. To avoid the activation of facial-recognition brain mechanisms, pictures containing close views of humans were not included. Paintings were divided into 20 sets of 6 images each (3 figurative, 3 abstract). *Acoustic stimuli* consisted in 40 excerpts (15 sec each): 20 were derived from classic music; other 20 from instrumental jazz.

Procedure. Participants were asked to perform computerized rating tasks to express an aesthetic judgment (*How much do you like the image?*) for each image they saw. A blue horizontal rating bar appeared below the image and participants were informed that it was meant to express a 0–100% liking scale.



Sample of the pictorial stimuli employed



Excerpts from classic music:

Vivaldi: Concerto 5 for flute Allegro non molto
Tchaikovsky: Swan lake suite Op 20A Valse
Stravinsky: Violin Concert in D Toccata
Stravinsky: Symphonies of wind instruments
Schoenberg: Verklarte nacht Op 4 Breiter
Schoenberg: Piano concerto op.42 Giocoso
Respighi: La colomba
Rachmaninov: Piano concert #4 in G minor Allegro
Mussorgsky: Pictures at an exhibition
Mozart: Sinfonia #40 in G minor K550 Molto allegro
Marini: Ecco a tre violini
Maderna: Quartetto per Archi
Lutoslawski: Chain 2 A battuta
Liszt: Hungarian Rhapsody #3 in B flat S 244/3
Janacek: Sonata 1.X.1905 The presentiment
Debussy: String quartet - Assez vif tres rythme
Chopin: Polonaise #3 in A Op 41/1 "Military"
Beethoven: String quartet in B-flat major, Op. 130
Bartok: Piano concerto #1 SZ 83
Bach: Orchestral suite #3 in D BWV 1068

Excerpts from instrumental jazz:

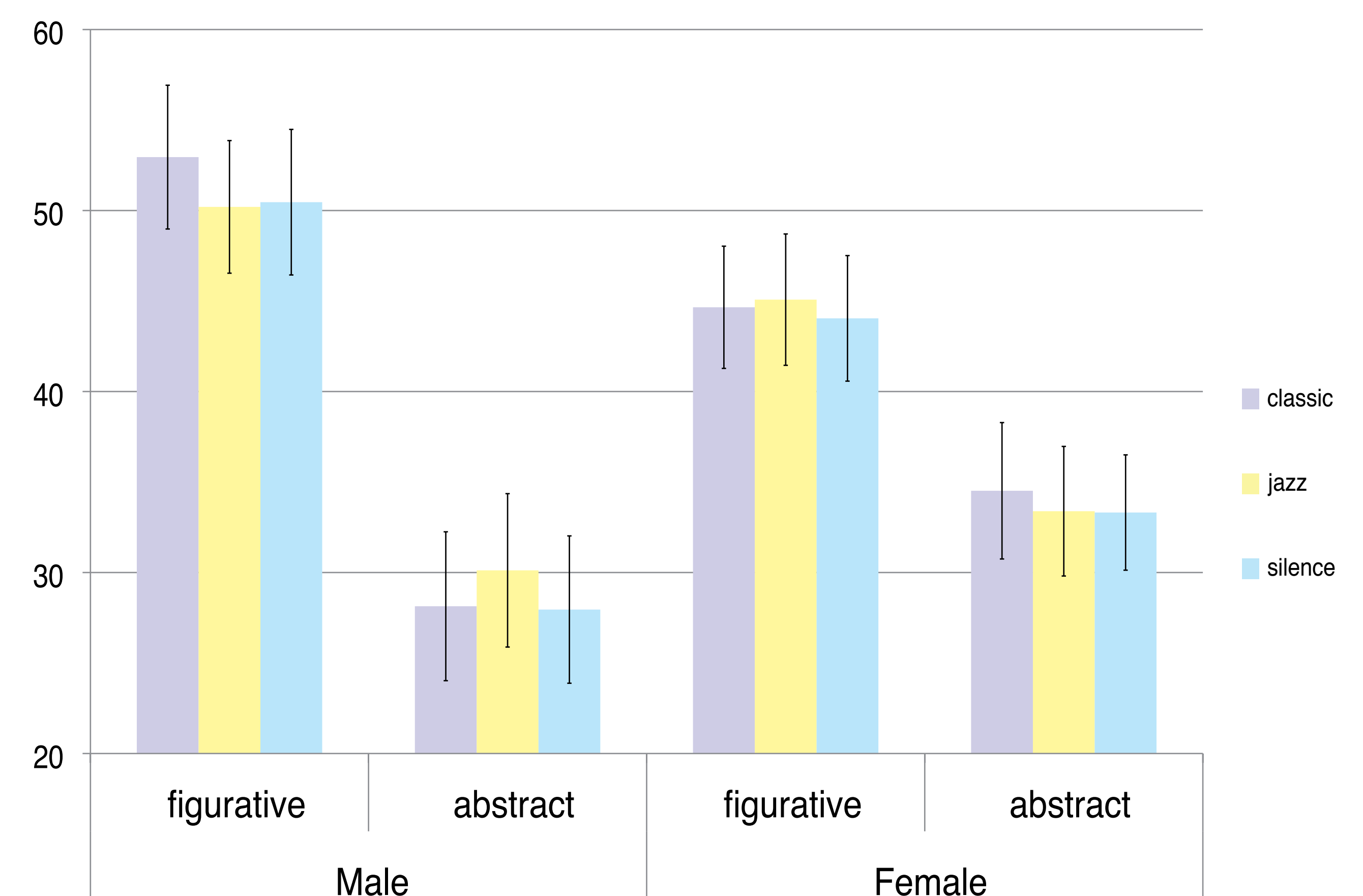
Wayne Shorter (1965): Speak no evil
Sonny Rollins (1956): Strode rode
Enrico Pieranunzi (1997): Thiaki
Thelonius Monk (1956): Bemsha swing
Giovanni Mirabassi (2003): Mata Hari
Wynton Marsalis (1985): Aural oasis
Pete Jolly (1963): My favorite things
Dave Holland (2001): The razor's edge
Hiromi (2003): XYZ
Herbie Hancock (1962): Three bags full
Herbie Hancock (1997): The sorcerer
Charlie Haden (1994): Relaxin' at Camarillo
Charlie Haden (1989): Bay City
Bill Frisell (2004): 1968
Paolo di Sabatino (2009): It might as well be spring
Miles Davis (1969): Miles runs the voodoo down
Miles Davis (1965): Little one
John Coltrane (1964): Liberia
Art Blakey (1957): Theory of Art
Gene Ammons (1960): Close your eyes

Results. Results revealed a significant main effect of *Art* (figurative, abstract) $F(2,28)=19.64$, $p<.01$ indicating overall higher liking for figurative art. The main effects of *Music* (silence, classic, jazz) $F(2,56)=1.97$, $p=.15$ and *Gender* (female, male) $F(2,56)=.05$, $p=.83$ were not significant. The interaction *Art x Music x Gender* was significant $F(2,28)<1$, $p=.037$. None of the two-way interactions reached significance. The three-way significant interaction was further analyzed by looking at the simple main effects of *Art* and *Music* within each gender.

For *female* participants, the ANOVA *Art by Music* revealed a significant main effect of *Art* $F(1,14)=8.74$, $p=.01$. The main effect of *Music* $F(2,28)<1$, $p=.59$ and the interaction *Art x Music* $F(2,28)<1$, $p=.49$ were not significant.

For *male* participants, the ANOVA revealed a significant main effect of *Art* $F(1,14)=11.72$, $p<.01$; the main effect of *Music* was not significant $F(2,28)=1.73$, $p=.19$; the interaction *Art by Music* approached significance $F(2,28)=2.84$, $p=.07$. For *figurative paintings*, post-hoc comparisons showed that liking scores were significantly higher in the classic music condition compared to both the jazz music $t(14)=3.02$, $p=.009$ and the silence condition $t(14)=2.30$, $p=.037$; jazz music and silence conditions did not significantly differ from each other $t(14)<1$, $p=.78$. For *abstract paintings*, post-hoc comparisons showed that liking scores were not significantly different in the silence compared to both classical $t(14)<1$, $p=.90$, and jazz condition $t(14)<1$, $p=.23$. Also the comparison between classical and jazz music did not reach significance $t(14)=1.86$, $p=.08$.

Discussion. We found that figurative art receives a higher degree of appreciation than abstract art among university students who are not involved in artistic activities. This difference in the levels of appreciation is enhanced in male students. Music did not have an influence on female participants, but it did affect the aesthetic appreciation of paintings in male participants. In particular, classic music significantly enhanced liking ratings for figurative art, whilst jazz music somewhat improved liking ratings for abstract art. The gender effect of music on painting evaluation is novel and calls for further investigation.



References.

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