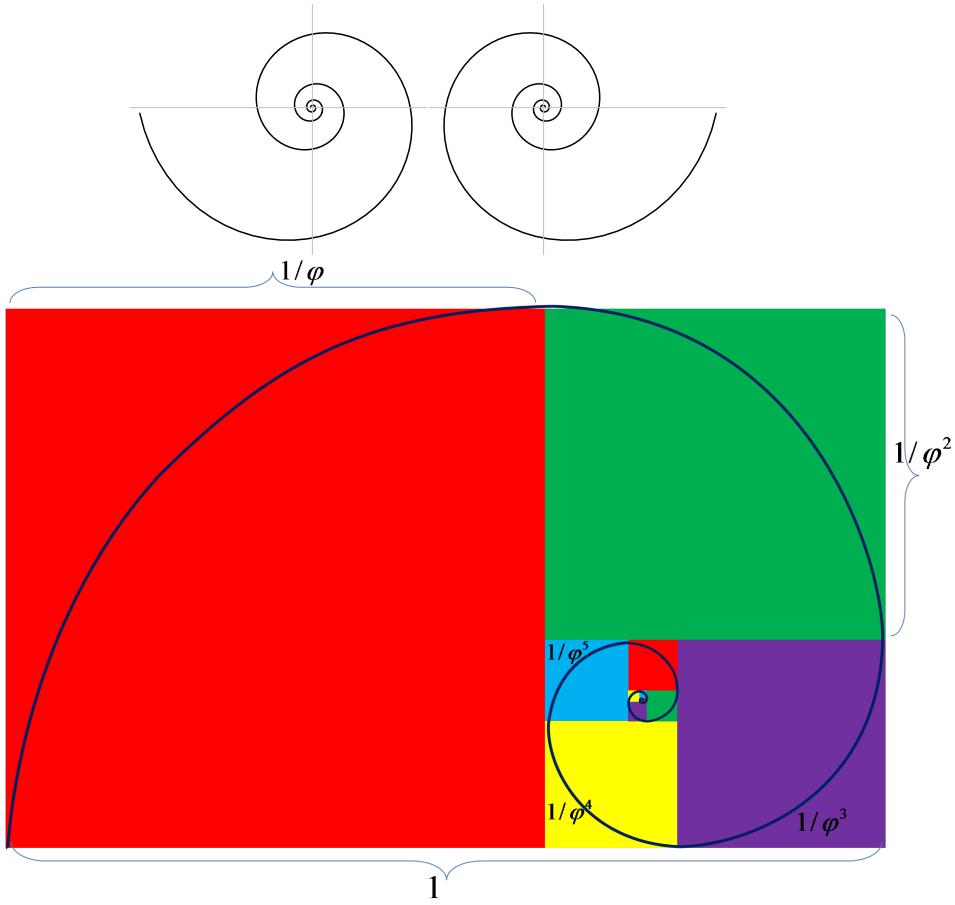
Psychology of Æsthetic Judgment

PSYC 4541

Spring 2018, Tuesday and Thursday, 15:30–16:45
Muenzinger D346

Lewis O. Harvey, Jr. – Instructor



Remember how in that communion only, beholding beauty with the eye of the mind, he will be enabled to bring forth, not images of beauty, but realities (for he has hold not of an image but of a reality), and bringing forth and nourishing true virtue to become the friend of God and be immortal, if mortal man may.

-Plato, Symposium

(Beauty lies in the eyes of the beholder.)

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The Psychology of Aesthetic Judgment

This course will explore the psychological and neural bases of aesthetic judgments in photography, painting, and music. You will read and report on primary journal papers. You will search the scientific literature for additional articles relevant to topics that are of interest to you. You will design and conduct an experiment of your choice to explore current ideas and test hypotheses. You will learn how to analyze preference and similarity judgments using modern multidimensional scaling methods. This course is open to advanced undergraduates and graduate students.

The course is divided roughly into three parts:

1. Background reading and in-class presentations of scientific articles

2. Introduction of new student-generated reading and the formulation of testable hypotheses

3. Design and execution of experiments that test the hypotheses. Students will make presentations of their research findings both in class and at the Spring Undergraduate Research Day, 2 May 2018)

Course participants are expected to participate at a high level and engage in sparkling intellectual interactions with me and the other participants in the class. The two main goals of the course are to learn new skills and to have fun doing it.

Office Hours

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Syllabus Topics and Reading Assignments

16 Jan	Introduction
18 Jan	Faces
23 Jan	Faces
25 Jan	Faces
31 Jan	Graphic Compositions
1 Feb	Graphic Compositions
6 Feb	Graphic Compositions
8 Feb	Music
13 Feb	Music
15 Feb	Music
20 Feb	New Readings
22 Feb	New Readings
27 Feb	New Readings
1 Mar	New Readings
6 Mar	New Readings
8 Mar	New Readings
13 Mar	New Readings
15 Mar	New Readings
20 Mar	New Readings
22 Mar	New Readings
27 Mar	**Spring Break**
29 Mar	**Spring Break**
3 Apr	Hypothesis Testing
5 Apr	Hypothesis Testing
10 Apr	Hypothesis Testing
12 Apr	Hypothesis Testing
17 Apr	Hypothesis Testing
19 Apr	Hypothesis Testing
24 Apr	Data Analyses
26 Apr	Data Analyses
1 May	Data Analyses
2 **May**	**Undergraduate Research Day 15:00–17:00, UMC Glenn Miller**
3 May	Final Class Meeting (FCQ)
5 May	**Final Exam Saturday (13:30–16:00)**

Readings

1.	16 Jan 2018	(Martindale, 2007)	
	18 Jan 2018	(Langlois & Roggman, 1990)	
2.	23 Jan 2018	(Halberstadt, Pecher, Zeelenberg, Ip Wai, & Winkielman, 2013)	Lew
	25 Jan 2018	(Chatterjee, Thomas, Smith, & Aguirre, 2009; Rhodes et al., 2007)	Lew
3.	30 Jan 2018	(Chatterjee, 2010; Tyler, 2007)	Lew; Sienna
	1 Feb2018	(Ramachandran & Hirstein, 1999; Tyler, 1999)	Sean; Michaela
4.	6 Feb 2018	(Di Dio, Macaluso, & Rizzolatti, 2007; Pallett, Link, & Lee, 2010)	Elizabeth; McKenna
	8 Feb 2018	(Bigand, Vieillard, Madurell, Marozeau, & Dacquet, 2005)	Miles
5.	13 Feb 2018	(Holbrook & Anand, 1990)	Scott
	15 Feb 2018	(Plomp & Levelt, 1965)	Ian
6.	20 Feb 2018	(Levitin, Grahn, & London, 2018)	Lew
	22 Feb 2018	(Kornysheva, von Cramon, Jacobsen, & Schubotz, 2010)	Sienna
7.	27 Feb 2018	(Blood & Zatorre, 2001)	Ian
	1 Mar 2018	(Alpert, Alpert, & Maltz, 2005; Tavani, Caroff, Storme, & Collange, 2016)	Scott
8.	6 Mar 2018	(Cutting, 2016; Cutting, DeLong, & Nothelfer, 2010)	Lew
	8 Mar 2018	(Liu et al., 2017; Lozon & Bensimon, 2014)	Elizabeth
9.	13 Mar 2018	(Haertel & Carbon, 2014; Pandelaere, Millet, & den Bergh, 2010)	Michaela
	15 Mar 2018	(Ewing, Rhodes, & Pellicano, 2010; Mather, 2012)	McKenna
10.	20 Mar 2018	(Krumhansl, 1997)	Miles
	22 Mar 2018	(Summerfeldt, Gilbert, & Reynolds, 2015)	Sean
11.	**27 Mar 2018**	**Spring Break**	
	29 Mar 2018	**Spring Break**	
12.	3 Apr 2018		
	5 Apr 2018		
13.	10 Apr 2018		
	12 Apr 2018		
14.	17 Apr 2018		
	19 Apr 2018		
15.	24 Apr 2018		
	26 Apr 2018		
16.	1 May 2018		
	2 May2018	**Undergraduate Research Day, 15:00–17:00, UMC Glenn Miller Ballroom**	
	3 May 2018	**Final Class Meeting (FCQ)**	

Copies of these papers are available to download for reading through Canvas using your CU IdentiKey ID. See the reference section at the end of the syllabus for complete citation information.

Conditions Under Which the Course Operates

Class Meetings:
The class meetings will be highly interactive. Each student will make a minimum of two presentations of an original research article to the rest of the class. The whole class will evaluate the presentation and I will provide each student with feedback. Each presentation will be worth 50 points.

Additional Readings:
There are 13 original journal papers that are assigned for the first part of the course. Each student is expected to research a paper topic (typically one that they present to the class) and find two additional papers that add to the topic. These papers will form the reading for the second segment of the course. The quality of these papers and the resulting presentation to the class will be worth 50 points

Hypotheses:
As the semester progresses we will accumulate a list of testable hypotheses that will form the basis for the experiments that we will do. As part of each reading, you will formulate at least one testable hypothesis. Each hypothesis is worth 5 points.

Hypotheses Testing:
We will form teams of 3-5 students. Each team will design and carry out a simple experiment to test one of the hypotheses that have been generated from the reading. The experiments will be executed on computers using available software tools. You do not have to be a computer programmer!!!! I will help you implement your experiments and carry out any statistical analyses.

Final Results:
Each team will prepare a poster presentation for the Undergraduate Research Day, held on Wednesday, 2 May 2018, from 15:00–17:00, in the UMC Glenn Miller Ballroom. The quality of the poster will rate a maximum of 50 points. During the last week of classes, each group will give a 15 minute presentation of their results using PowerPoint or Keynote to the rest of the class. The Quality of this presentation is worth 50 points. Finally, each group will prepare a written summary of their experiment with Introduction, Methods, Results, Discussion, and Reference sections. This written paper is worth 50 points.

Grading (Undergraduates):
Your final grade is computed from your points as described above. The total possible points in the course is 300:

100	In-Class Presentations
25	Hypotheses
50	Poster Presentation
50	PowerPoint Presentation
50	Written Report of Experiment
25	Enthusiasm

300	Total Possible Points

Final Grade:
Your final letter grade in the course will be assigned in the following manner. First a "Reference Score" will be calculated by taking the mean of the top five percent of the class. Your grade will be determined by how well you have done in comparison to this reference score:

	A >96.6%,	A- >93.3% of the reference score
B+ >90.0%,	B >86.6%,	B- >83.3% of the reference score
C+ >80.0%,	C >76.6%,	C- >73.3% of the reference score
D+ >70.0%,	D >66.6%,	D- >63.3% of the reference score
	F <63.3%	

It is therefore possible for the entire class to receive the grade of A. By the same token, it is also possible that very few people would receive an A, depending on the spread of grades across the class.

Comments About the Psychology of Æsthetic Judgment

Why Take This Course?
There are four reasons to take this course:

1. To gain an understanding of the basis of our æsthetic experiences;

2. To sharpen your ability to critically evaluate the results of published experiments;

3. To gain practical skills in the use of computers for carry out experiments, for analyzing and graphing data, and for preparing reports of your findings;

4. Have fun during your last semester at CU.

Prerequisites:
A broad understanding of the basic concepts from a general psychology course is assumed. You will be using methods of inferential statistics, such as those taught in Psychology 2111/3111, to evaluate the results of your experiment. A facile ability with these methods in particular will be necessary. **I am here to help you.**

You will be expected to write in a clear and grammatically correct style in this class. If you believe you will require extra help with your writing, please contact The Writing Center, located in Norlin Commons (Norlin E111). Information about appointments, etc. can be found at: http://www.colorado.edu/pwr/writingcenter.html.

AGREEMENTS FOR PARTICIPATING IN THE COURSE

The purpose of these agreements is to create a condition that allows all people in the class to get maximum value from the course.

AGREEMENTS

1 You agree to be responsible for these agreements.

2 You agree to be on time to class

3 You agree to complete the assigned reading on time.

4 You agree to complete your presentation assignments on time.

5 You agree to attend all class meetings unless an emergency comes up.

6 You agree to understand the material.

7 You agree to ask questions when you don't understand the material.

8 You agree to communicate any complaints and criticisms you may have only to someone who can do something about the situation and you agree not to complain or to criticize to someone who cannot do something about the situation.

9 You agree to get value out of your participation in the course.

If you attend the next class meeting, you are accepting responsibility for the above agreements.

Academic Integrity Policy

A university's intellectual reputation depends on maintaining the highest standards of intellectual honesty. Commitment to those standards is a responsibility of every student, faculty, and staff member on the University of Colorado at Boulder campus.

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Honor Code

A student-run Honor Code was instituted on the Boulder Campus in 2002. The intent of the Honor Code is to establish a community of trust where students do not plagiarize, cheat, or obtain unauthorized academic materials. An honor code council collaborates with the colleges and schools in addressing allegations and instances of academic dishonesty and in assisting to educate all members of the university community on academic integrity issues.

Breaches of academic honesty include cheating, plagiarism, and the unauthorized possession of examinations, papers, computer programs, as well as other class materials specifically released by the faculty.

A student accused of academic dishonesty will either accept the accusation made by a faculty member or request a hearing before a student panel, who will make a decision on the accusation of academic dishonesty. In addition to academic sanctions imposed by the faculty, students found guilty of academic dishonesty also face consequences from the honor code council ranging from attending a mandatory class in ethics to expulsion from the campus. More information about CU-Boulder's Honor Code may be found at www.colorado.edu/academics/honorcode/Home.html.

The following terms are clarified for the benefit of all members of the university community.

Cheating

Cheating is defined as using unauthorized materials or receiving unauthorized assistance during an examination or other academic exercise. Examples of cheating include: copying the work of another student during an examination or other academic exercise (includes computer programming), or permitting another student to copy one's work; taking an examination for another student or allowing another student to take one's examination; possessing unauthorized notes, study sheets, examinations, or other materials during an examination or other academic exercise; collaborating with another student during an academic exercise without the instructor's consent; and/or falsifying examination results.

Plagiarism

Plagiarism is defined as the use of another's ideas or words without appropriate acknowledgment. Examples of plagiarism include: failing to use quotation marks when directly quoting from a source; failing to document distinctive ideas from a source; fabricating or inventing sources; and copying information from computer-based sources, i.e., the Internet.

Unauthorized Possession or Disposition of Academic Materials

Unauthorized possession or disposition of academic materials may include: selling or purchasing examinations, papers, reports or other academic work; taking another student's academic work without permission; possessing examinations, papers, reports, or other assignments not released by an instructor; and/or submitting the same paper for multiple classes without advance instructor authorization and approval.

Reproduced from: http://www.colorado.edu/policies/academic-integrity-policy

Check out http://www.umuc.edu/writingcenter/plagiarism/ for explicit examples.

Statements Recommended by
Associate Vice Chancellor for Undergraduate Education

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit to your professor a letter from Disability Services in a timely manner (for exam accommodations provide your letter at least one week prior to the exam) so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at dsinfo@colorado.edu. If you have a temporary medical condition or injury, see Temporary Injuries guidelines under the Quick Links at the Disability Services website and discuss your needs with your professor.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, please let me know when you have conflicts so we can accommodate you.
See the campus policy regarding religious observances for full details.

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on classroom behavior and the student code.

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to maintaining a positive learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, discrimination, harassment or related retaliation against or by any employee or student. CU's Sexual Misconduct Policy prohibits sexual assault, sexual exploitation, sexual harassment, intimate partner abuse (dating or domestic violence), stalking or related retaliation. CU Boulder's Discrimination and Harassment Policy prohibits discrimination, harassment or related retaliation based on race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Individuals who believe they have been subject to misconduct under either policy should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127. Information about the OIEC, the above referenced policies, and the campus resources available to assist individuals regarding sexual misconduct, discrimination, harassment or related retaliation can be found at the OIEC website.

Honor Code
All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the academic integrity policy of the institution. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access, clicker fraud, resubmission, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code Council as well as academic sanctions from the faculty member. Additional information regarding the academic integrity policy can be found at honorcode.colorado.edu.

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Plagiarism
Plagiarism is defined as the use of another's ideas or words without appropriate acknowledgment. Examples of plagiarism include: failing to use quotation marks when directly quoting from a source; failing to document distinctive ideas from a source; fabricating or inventing sources; and copying information from computer-based sources, i.e., the Internet. Check out this web document for a detailed discussion:

(https://ori.hhs.gov/sites/default/files/plagiarism.pdf) .

Unauthorized Possession or Disposition of Academic Materials
Unauthorized possession or disposition of academic materials may include: selling or purchasing examinations, papers, reports or other academic work; taking another student's academic work without permission; possessing examinations, papers, reports, or other assignments not released by an instructor; and/or submitting the same paper for multiple classes without advance instructor authorization and approval.

Reproduced from: http://www.colorado.edu/policies/academic-integrity-policy.

References

Alpert, M. I., Alpert, J. I., & Maltz, E. N. (2005). Purchase occasion influence on the role of music in advertising. *Journal of Business Research, 58*(3), 369-376. doi:https://doi.org/10.1016/S0148-2963(03)00101-2

Bigand, E., Vieillard, S., Madurell, F., Marozeau, J., & Dacquet, A. (2005). Multidimensional scaling of emotional responses to music: The effect of musical expertise and of the duration of the excerpts. *Cognition & Emotion, 19*, 1113-1139.

Blood, A. J., & Zatorre, R. J. (2001). Intensely pleasurable responses to music correlate with activity in brain regions implicated in reward and emotion. *Proceedings of the National Academy of Sciences, 98*(20), 11818-11823.

Chatterjee, A. (2010). Neuroaesthetics: A Coming of Age Story. *Journal of Cognitive Neuroscience, 23*(1), 53-62. doi:10.1162/jocn.2010.21457

Chatterjee, A., Thomas, A., Smith, S., & Aguirre, G. K. (2009). The neural response to facial attractiveness. *Neuropsychology, 23*(2), 135–143.

Cutting, J. E. (2016). The evolution of pace in popular movies. *Cognitive Research: Principles and Implications, 1*(1), 30. doi:10.1186/s41235-016-0029-0

Cutting, J. E., DeLong, J. E., & Nothelfer, C. E. (2010). Attention and the Evolution of Hollywood Film. *Psychological Science, 21*(3), 432-439. doi:10.1177/0956797610361679

Di Dio, C., Macaluso, E., & Rizzolatti, G. (2007). The Golden Beauty: Brain Response to Classical and Renaissance Sculptures. *PLoS ONE, 2*(11), e1201. doi:10.1371/journal.pone.0001201

Ewing, L., Rhodes, G., & Pellicano, E. (2010). Have you got the look? Gaze direction affects judgements of facial attractiveness. *Visual Cognition, 18*(3), 321-330. doi:10.1080/13506280902965599

Haertel, M., & Carbon, C.-C. (2014). Is This a “Fettecke” or Just a “Greasy Corner”? About the Capability of Laypersons to Differentiate between Art and Non-Art via Object's Originality. *i-Perception, 5*(7), 602-610. doi:10.1068/i0664

Halberstadt, J., Pecher, D., Zeelenberg, R., Ip Wai, L., & Winkielman, P. (2013). Two Faces of Attractiveness: Making Beauty in Averageness Appear and Reverse. *Psychological Science, 24*(11), 2343-2346.

Holbrook, M. B., & Anand, P. (1990). Effects of Tempo and Situational Arousal on the Listener's Perceptual and Affective Responses to Music. *Psychology of Music, 18*(2), 150-162. doi:10.1177/0305735690182004

Kornysheva, K., von Cramon, D. Y., Jacobsen, T., & Schubotz, R. I. (2010). Tuning-in to the beat: Aesthetic appreciation of musical rhythms correlates with a premotor activity boost. *Human Brain Mapping, 31*(1), 48-64. doi:10.1002/hbm.20844

Krumhansl, C. L. (1997). An exploratory study of musical emotions and psychophysiology. *Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale, 51*(4), 336-353. doi:http://dx.doi.org/10.1037/1196-1961.51.4.336

Langlois, J. H., & Roggman, L. A. (1990). Attractive Faces Are Only Average. *Psychological Science, 1*(2), 115-121. doi:10.1111/j.1467-9280.1990.tb00079.x

Levitin, D. J., Grahn, J. A., & London, J. (2018). The Psychology of Music: Rhythm and Movement. *Annual Review of Psychology, 69*(1), 51-75. doi:10.1146/annurev-psych-122216-011740

Liu, C., Brattico, E., Abu-jamous, B., Pereira, C. S., Jacobsen, T., & Nandi, A. K. (2017). Effect of Explicit Evaluation on Neural Connectivity Related to Listening to Unfamiliar Music. *Frontiers in Human Neuroscience, 11*(611). doi:10.3389/fnhum.2017.00611

Lozon, J., & Bensimon, M. (2014). Music misuse: A review of the personal and collective roles of "problem music". *Aggression and Violent Behavior, 19*(3), 207-218. doi:https://doi.org/10.1016/j.avb.2014.04.003

Martindale, C. (2007). Recent Trends in the Psychological Study of Aesthetics, Creativity, and the Arts. *Empirical Studies of the Arts, 25*(2), 121-141. doi:10.2190/B637-1041-2635-16NN

Mather, G. (2012). Aesthetic Judgement of Orientation in Modern Art. *i-Perception, 3*(1), 18-24. doi:10.1068/i0447aap

Pallett, P. M., Link, S., & Lee, K. (2010). New "golden" ratios for facial beauty. *Vision Research, 50*(2), 149-154. doi:http://dx.doi.org/10.1016/j.visres.2009.11.003

Pandelaere, M., Millet, K., & den Bergh, B. V. (2010). Madonna or Don McLean? The effect of order of exposure on relative liking. *Journal of Consumer Psychology, 20*(4), 442-451. doi:https://doi.org/10.1016/j.jcps.2010.07.003

Plomp, R., & Levelt, W. J. M. (1965). Tonal consonance and critical bandwidth. *Journal of the Acoustical Society of America, 38*(4), 548–560.

Ramachandran, V. S., & Hirstein, W. (1999). The science of art: A neurological theory of aesthetic experience. *Journal of Consciousness Studies, 6*(6-7), 15-51.

Rhodes, G., Yoshikawa, S., Palermo, R., Simmons, L. W., Peters, M., Lee, K., . . . Crawford, J. R. (2007). Perceived health contributes to the attractiveness of facial symmetry, averageness, and sexual dimorphism. *Perception, 36*(8), 1244-1252.

Summerfeldt, L. J., Gilbert, S. J., & Reynolds, M. (2015). Incompleteness, aesthetic sensitivity, and the obsessive-compulsive need for symmetry. *Journal of Behavior Therapy and Experimental Psychiatry, 49*, 141-149. doi:https://doi.org/10.1016/j.jbtep.2015.03.006

Tavani, J. L., Caroff, X., Storme, M., & Collange, J. (2016). Familiarity and liking for music: The moderating effect of creative potential and what predict the market value. *Learning and Individual Differences, 52*, 197-203. doi:https://doi.org/10.1016/j.lindif.2014.11.026

Tyler, C. W. (1999). Is art lawful? *Science, 285*(5428), 673–674. doi:10.1126/science.285.5428.673

Tyler, C. W. (2007). Some principles of spatial organization in art. *Spatial Vision, 20*(6), 509–530. doi:10.1163/156856807782758377