

Comparative Effects of Arts on Audiences

Narrative arts are theorized to facilitate social learning and cooperation, whereas visual arts are associated with individual cognitive and emotional processing.

Abstract

Brown (2019) differentiates types of art by noting that narrative arts engage audiences through storytelling mechanisms such as personal engagement, role playing, cognitive structuring, and performance. In this view, narrative arts are thought to simulate prosocial behavior and foster social learning. Brown's theory also distinguishes coordinative arts—which promote group synchronization—from narrative arts, though only the latter pertain directly to the research question.

Leder and Nadal (2014) outline a five-stage information-processing model of aesthetic appreciation that applies to visual arts. The stages are:

1. Perception
2. Implicit memory integration
3. Explicit classification
4. Cognitive mastering and evaluation
5. Ongoing emotional evaluation

Here, visual arts are associated with individual aesthetic responses such as surprise, uncertainty, and pleasure, without an explicitly stated evolutionary function. In sum, narrative arts are framed as adaptive tools for social learning and cooperation, while visual arts are linked to structured cognitive and emotional appreciation.

Paper search

Using your research question "How do EP theories about the effects of arts on audiences differ for visual arts vs narrative arts?", we searched across over 126 million academic papers from the Semantic Scholar corpus. We retrieved the 50 papers most relevant to the query.

Screening

We screened in papers that met these criteria:

- **Evolutionary Psychology Framework:** Does the study explicitly employ evolutionary psychology theories or frameworks in its analysis?
- **Art Medium:** Does the study examine either visual arts (e.g., painting, sculpture, photography) or narrative arts (e.g., literature, storytelling)?
- **Audience Focus:** Does the study primarily examine audience/viewer responses or reactions to artworks?
- **Theoretical Connection:** Does the study provide theoretical analysis or empirical evidence linking art reception to evolutionary mechanisms?
- **Study Purpose:** Is the study's primary focus on art reception rather than art creation, technical aspects, or art education?
- **Study Type:** Is the study either (a) original research examining art reception, or (b) a systematic review/meta-analysis of relevant evolutionary psychology theories in art reception?

- **Research Context:** Does the study examine art reception in a theoretical or empirical context rather than focusing solely on physiological responses without theoretical framework?

We considered all screening questions together and made a holistic judgement about whether to screen in each paper.

Data extraction

We asked a large language model to extract each data column below from each paper. We gave the model the extraction instructions shown below for each column.

- **Type of Arts Theory/Model Examined:**

Identify and describe the specific theoretical model or framework used in the study related to arts and audience effects. Look in the introduction, theoretical framework, or discussion sections.

Extraction should include:

- Name of the theory/model
- Brief description of its key components
- Specific focus on narrative vs. visual/coordinative arts distinctions
- If multiple theories are discussed, list all relevant ones

If no explicit theory is presented, write "No specific theory identified".

- **Theoretical Approach to Arts Classification:**

Examine how the study categorizes or distinguishes between different types of arts, particularly narrative vs. visual/coordinative arts.

Extract:

- Specific categories of arts proposed
- Criteria used for classification
- Psychological or social mechanisms underlying the categorization
- Any evolutionary or functional explanations for arts distinctions

If no explicit classification is provided, write "No arts classification described".

- **Psychological Processing Mechanisms:**

Identify and describe the psychological processes discussed in relation to arts engagement.

Extract:

- Cognitive processes involved
- Emotional processing mechanisms
- Information processing stages
- Individual differences in arts perception

Focus on differences between narrative and visual arts processing, if discussed. If no specific mechanisms are detailed, write "No psychological mechanisms described".

- **Social Functions of Arts:**

Describe the social functions or impacts of arts proposed in the study.

Extract:

- Social learning mechanisms
- Group cohesion effects
- Prosocial behavior promotion
- Interpersonal or collective engagement processes

Specifically note any distinctions between narrative and visual arts in social functioning. If no social functions are discussed, write "No social functions described".

• **Empirical Evidence and Methodology:**

Describe the empirical approach used to investigate arts effects:

Extract:

- Research design (experimental, observational, theoretical)
- Data collection methods
- Participant characteristics (if empirical study)
- Key methodological approaches used to study arts effects

If the work is purely theoretical, note "Theoretical analysis". If no clear methodology is described, write "Methodology not specified".

Results

Characteristics of Included Studies

Study	Study Focus	Theoretical Framework	Art Types Covered	Key Psychological Mechanisms	Full text retrieved
Brown, 2019	Classification and functions of arts	Narration/Coordination model	Narrative arts and coordinative arts	Personal engagement, role playing, cognitive structure, performance	No

Study	Study Focus	Theoretical Framework	Art Types Covered	Key Psychological Mechanisms	Full text retrieved
Leder and Nadal, 2014	Aesthetic appreciation and judgment	Information-processing model of aesthetic appreciation	Modern art, traditional art forms	Perception, implicit memory integration, explicit classification, cognitive mastering and evaluation, ongoing emotional evaluation	Yes

The two included studies focused on different aspects of art appreciation:

- Classification and functions of arts (Brown, 2019)
- Aesthetic appreciation and judgment (Leder and Nadal, 2014)

Each study used a different theoretical framework:

- Narration/Coordination model (Brown, 2019)
- Information-processing model of aesthetic appreciation (Leder and Nadal, 2014)

Key psychological mechanisms identified:

Brown (2019):

- Personal engagement
- Role playing
- Cognitive structure
- Performance

Leder and Nadal (2014):

- Perception
- Implicit memory integration
- Explicit classification
- Cognitive mastering and evaluation
- Ongoing emotional evaluation

Thematic Analysis

Processing Mechanisms

Brown's (2019) Narration/Coordination model:

- Distinguishes between two types of arts based on primary functions:

1. Narrative arts:
 - Associated with storytelling and promoting social learning
 - Processing mechanisms likely involve cognitive processes related to understanding and learning from stories
2. Coordinative arts:
 - Linked to stimulating group participation through synchronized action
 - Processing mechanisms involve synchronization and group cohesion

Leder and Nadal's (2014) model:

- Provides a detailed account of psychological processes in aesthetic appreciation
- Applicable to both visual and narrative arts
- Five-stage model:
 1. Perception
 2. Implicit memory integration
 3. Explicit classification
 4. Cognitive mastering and evaluation
 5. Ongoing emotional evaluation
- Suggests interaction between cognitive and emotional processes
- Allows for independence between cognitive judgments and emotional responses

Evolutionary Functions

Brown's (2019) perspective:

- Arts are evolutionarily adaptive by promoting social cooperation through two routes:
 1. Narrative arts: Simulation of prosocial behaviors
 2. Coordinative arts: Stimulation of group synchronization and cohesion
- Implies different types of arts may have evolved to serve different social functions

Leder and Nadal's (2014) perspective:

- Do not explicitly discuss evolutionary functions in the same way as Brown
- Mention potential social functions of art:
 - Enhancing group fitness in resource competition
 - Reinforcing social cooperation and group cohesion through engagement in group activities and rituals

Audience Effects

Brown's (2019) model implications:

- Narrative arts:
 - Primary effect: Social learning and promotion of prosocial behaviors
- Coordinative arts:
 - Primary effect: Stimulating group participation and reinforcing group affiliation

Leder and Nadal's (2014) model focus:

- Individual cognitive and emotional processing in aesthetic appreciation
- Art can produce aesthetic emotions:

- Uncertainty
- Surprise
- Pleasure
- Interaction of cognitive and emotional processes
- Individual differences (e.g., genetic variations affecting neurotransmitter function) can influence cognitive and emotional processing of art

Art Type	Primary Effects	Processing Model	Evolutionary Purpose
Narrative Arts	Social learning, promotion of prosocial behaviors	Storytelling, modeling of behaviors	Simulation of prosocial behaviors
Coordinative Arts	Group participation, reinforcement of group affiliation	Synchronization, group cohesion	Stimulation of group synchronization and cohesion
Visual Arts (inferred from Leder and Nadal)	Aesthetic appreciation, emotional responses	Five-stage information processing model	No mention found

The analysis focused on three types of art: Narrative Arts, Coordinative Arts, and Visual Arts. We examined their primary effects, processing models, and evolutionary purposes.

Primary Effects:

- Six distinct primary effects were identified across the three art types
- Narrative Arts: Social learning and prosocial behaviors
- Coordinative Arts: Group participation and group affiliation
- Visual Arts: Aesthetic appreciation and emotional responses

Processing Models:

- Five distinct processing models were identified across the three art types
- Narrative Arts: Storytelling and modeling of behaviors
- Coordinative Arts: Synchronization and group cohesion
- Visual Arts: Five-stage information processing model

Evolutionary Purpose:

- Explicit evolutionary purposes were found for two out of three art types
- Narrative Arts: Simulation of prosocial behaviors
- Coordinative Arts: Stimulation of group synchronization and cohesion
- Visual Arts: We didn't find mention of an explicitly stated evolutionary purpose

References

- H. Leder, and M. Nadal. “Ten Years of a Model of Aesthetic Appreciation and Aesthetic Judgments : The Aesthetic Episode - Developments and Challenges in Empirical Aesthetics.” *British Journal of Psychology*, 2014.
- Steven Brown. “A Unifying Model of the Arts: The Narration/Coordination Model.” *Empirical Studies of the Arts*, 2019.