

**What Is The Role of Emotions In Semiotic Strategies  
Used In Artistic Experiences?**

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### **Abstract**

Art remains a ubiquitous part of our lives, and the way it is perceived and made sense of is significantly influenced by emotions (Chatterjee & Vartanian, 2014). This study used a mixed and multi-method approach to study to examine the relationship between the role of emotions in semiotic strategies used in artistic experiences through an interdisciplinary lens. 36 participants from the Netherlands took part in the study in pairs (18 dyads), and were instructed to bring a meaningful art object which they each experienced. This was followed by pre and post-questionnaires on emotions and an audio-visually recorded semi-structured conversation based to facilitate reflection. Emotional intensity, emotional expressions, and the semiotic strategies of perception, imagination, conceptualisation and analysis used in the sense-making of art proposed by Van Heusden (2015) were assessed. Results reported that the strategy of conceptualisation evoked the most emotional expressions and emotional intensity, followed by imagination, perception, and then, analysis. Perception remained the most dominantly-used strategy to make sense of art with/without emotions involved. These findings can be explained through the significant influence of social relationships, memories, sensory appeals and perceived purpose that created meaning in participants' lives. Lastly, the findings make novel contributions and highlight the importance of the semiotic strategy of conceptualisation and emotions in the meaning and sense-making process of art. This consequently initiates multiple opportunities for future research in semiotic strategies, the serially-oriented sense-making process and the role of social relationships in the sense-making process of art.

*Keywords:* semiotic strategies, sense-making of art, emotions, art, artistic experience

## **What Is The Role of Emotions In Semiotic Strategies**

### **Used In Artistic Experiences?**

*“La société, en effet, commence par chanter ce qu’elle rêve, puis raconte ce qu’elle fait, et enfin se met à peindre ce qu’elle pense” (Hugo, 1827). [Society, in effect, begins by singing what it dreams, then recounts what it does, and finally paints what it thinks]*

Art has persisted through every period in time, all over the world, in all layers of society, in the most diverse forms possible (van Heusden, 2015). Millions of people across the world encounter and engage in different works of art regularly. From museums to nature to digital platforms - art remains a ubiquitous part of human life. Throughout history, researchers have been interested in understanding art and its implications - underlining humans’ fascination with art and the uniquely impactful experience it brings, often infused with diverse emotions (Scherer, 2004; Silvia et al., 2005a; Meninghaus et al., 2017; McCallum, 2019). Chatterjee and Vartanian (2014) reported that, “aesthetic experiences constitute art-induced emotions, valuations and actions, that translate into processes that underlie their interpretation and production - implying that emotions may play a significant role in the way art is perceived and made sense of. The human capacity to appreciate art is seemingly universal (Wah, 2017) - making it worth exploring the underlying role of emotions in the sense-making processes of art.

The last two decades have witnessed several empirical attempts at understanding this complex experience with art. Arts engagement involves multiple art forms of performing arts; visual arts, design and craft; literature; online and digital electronic arts; and community and

cultural festivals, fairs, and events that operate independently, but also collaborate, communicate, and intersect in art practice (Davies et al., 2012). Davies et al. (2012), suggest engagement can be either 'active' – relating to behaviours like making, creating, writing etc. or 'passive' – relating to behaviours like visiting, attending, listening etc. Thus, in this paper, it is considered that this type of engagement with art consequently creates an 'artistic experience'.

Hence, a surge of empirical approaches to studying art has resulted in the emergence of models covering aspects of cognition, behaviour, culture, history, affect, and neuroscience to explain the processes cultivating this experience. Efforts to provide an understanding of the role of neural systems have also been made - providing us with a leading framework based on neuroaesthetics.

### **Art and Emotions**

Despite the complexity of multiple interconnected factors implicated in artistic experiences, research has consistently shown that our experiences of engaging in paintings, literature, music, nature, or appealing sights, sounds, and trains of thought are usually accompanied and informed by emotions (Schindler et al. 2017). Art evokes a myriad of responses, ranging from a variety of subjective thoughts and feelings (Silvia, 2006), evaluations (Leder et al., 2004), physiological reactions (Tschacher et al., 2012), and can also influence the expression of behaviours (Dissayanake, 2008). Consequently, empathetic and affective responses play an essential role in accounts of how paintings (Leder & Nadal, 2014), music (Scherer & Coutinho, 2013), literature (Mar et al., 2011), film and television (Bartsch & Oliver, 2011) are processed cognitively.

### **Art and Psychology**

Donald (2006, p. 4) suggests that “art is an activity intended to influence the minds of an audience.” The psychological approach to understanding art mainly focuses on factors such as perception, personality, social and cultural settings, affective states and other contextual elements. Pelowski et al. (2016) investigated and compared these current leading models, and reported that a) ‘emotions’ and b) ‘evaluations’ (activation of schemas based on perception of visual features, expertise, content etc), play a central role in experiencing art, and are connected to c) ‘meaning making’ (making interpretations, associations and links to existing knowledge of self and/or the world). This postulates that these three elements could be the fundamentals of defining an artistic experience.

However, the current psychological models significantly differ in their explanations for ‘how’ one arrives at these certain emotions and evaluations. These explanations range from visual object identification (Chatterjee, 2010), intellectual art expertise (Leder et al., 2014), relative matching of schema and self (Silvia, 2005a,b), and employing different modes of analysis (Cupchik, 2011). This diversity implies that the strategies or mechanisms used to process art are unclear, and highlight the presently undetermined nature of art-related psychological approaches. This compels the necessity for a more comprehensive model that takes into account the overlaps and differences to produce a better, agreed-upon understanding of having an artistic experience.

### **Art Theory**

Interestingly, on the other hand, in art theory, the significance of contextual, cultural, institutional, and historical elements in how viewers perceive fine art has been repeatedly emphasised (McCallum et al., 2019). However, McCallum et al. argue that, “art experience is a phenomenon both highly cultural [...] and deeply rooted in the particulars of human

cognition, and in the way that communication is achieved” (2019, p. 33). It uses communication as a link between individual interpretive experiences with large social structures such as institutions and culture, that often inspire art. This sufficiently insinuates that the ‘cultural phenomenon’ of art may seem circular (Dickie, 1987) and reciprocal in nature; implying that culture, the individual, and art all influence one another over time and social contexts, in an iterative manner. However, the question of how and what makes artistic experiences meaningful to humans, and what this experience achieves, remains unanswered.

Thus, to truly understand the process of understanding art, an interdisciplinary approach needs to be employed that encompasses the goal of understanding the art-specific cognitive and emotional experiences that give art such a prominent position in human culture and, subsequently go beyond perceiving art solely as an interesting stimulus.

### **Emotions and Semiotic Strategies in Artistic Experiences**

The aforementioned discussions effectively highlight the urgency of an interdisciplinary approach to holistically understand the experience of art by incorporating the cultural phenomena of art and tying it in with cognition, emotion and meaning. Thus, the goal of this study is to examine the role of emotions, in terms of emotional intensity, in relation to the semiotic strategies involved in artistic experiences.

Philosophical aesthetics has a long history that supports the idea that aesthetic appeal is more ‘felt’ than ‘understood’ (Schindler et al., 2017). It is clear that aesthetic perception and judgment are not merely cognitive processes influenced by culture, but also largely involve feelings (Schindler et al., 2017). The way one ‘feels’ emotions is inherently subjective (Schindler et al., 2017). Thus, in this study, emotions can be defined to be, “multi-componential, including subjective feeling, appraisals, reactions in the service of

action preparation and expressions, action tendencies (including expressions), and regulation” (Scherer, 2005; Frijda, 2007).

Additionally, as proposed by Van Heusden (2015), the study of cognitive semiotics suggests that culture is not something that exists outside of human beings, but is a dimension of how humans process information - hence, influencing the study of culture and arts. Van Heusden (2015, p. 153) adds that, “art is not an empirical quality of objects, but of the cognitive activity that human beings can undertake with these objects” - indicating that art does not only constitute physical properties such as its form or colour through a sensory experience, but also considers the dimension of cognitive processes in which humans engage to understand it. Thus, enabling art to come to fruition in a culturally-cognitive context, in which it is processed, to create a semiotic, cultural and artistic experience.

In accordance with art theory’s stance on art being a communicative tool, evolutionary psychology indicates that the innate capacity for speech is a more general innate capacity for culture (Donald, 2006). Since culture can be looked at from a cognitivist lens, memories could also aid in the dialectical process of sense-making of art and engaging with it in a cultural context - implying that sharing this artistic experience is enabled through speech and discourse.

Hence, in an effort to bridge the gap between the psychological and cultural understanding of artistic experiences, Van Heusden (2015) introduced four basic cultural strategies (Table 1) based on ‘semiotics’ such as memory, and ‘cultural cognition’ - that can be used in the sense-making process of art. The scheme is inspired by the Piagetian model of cognition-as-adaptation, which distinguishes it in an accommodative and assimilative direction. In cognitive development, assimilation refers to the application of

previously-learned concepts to new concepts, whereas, accommodation refers to the alteration of previous concepts when new concepts are introduced (Piaget, 1954). The two types of memories considered are concrete/episodic; and abstract/semantic in nature.

Concrete/episodic memory refers to a type of long-term memory that involves the recollection of specific events, situations, and experiences - allowing one to recall personal experiences that shape one's life and perceptions (Byrne, 2008). "Abstract/semantic memory refers to memories of general knowledge about the world - consisting of concepts, facts, and beliefs that form conceptual knowledge through experience" (Yee et al., 2014, p. 353).

**Table 1**

*The Four Dimensions of Human Cognition (Van Heusden, 2015)*

Human Cultural Cognition	Accommodation	Assimilation
Concrete/Episodic Memory	Perception	Imagination
Abstract/Semantic Memory	Analysis	Conceptualisation

### ***Perception***

This strategy entails the sensory experience of art, focusing on the role of artwork properties that appeal to one's ability to observe, listen, smell, touch and feel, to make sense of it (Van Klaveren et al., 2023). It refers to properties such as colour, symmetry, proportion, contrast, and contour in arts (Dijkstra & van Dongen, 2017; Specker et al., 2020; Ruta et al., 2021). Arnheim's (1955) initiative to embed Gestalt principles to elicit aesthetic responses in art also plays a critical role in understanding how balance, symmetry and composition create different kinds of aesthetic experiences (Chatterjee, 2014; Van Geert & Wagemans, 2020).



### ***Imagination***

Imagination is one of the cognitive capacities that distinguishes humans from other species, which makes it possible to have an artistic experience (Van Heusden, 2010; Wah, 2017). The ‘degrees of imagination’ entails the power of forming, retaining, and manipulating mental images/schemas (Wah, 2017, p. 119), leading to the creation of art. Imagination allows humans to deal with their own experiences via ‘self-imagination’ - a cognitive strategy that involves acting out the recreation of one’s or other’s situations, independent of how they are perceived (Van Heusden, 2004; Wah, 2017). For instance, ‘living in one’s own universe and expressing oneself uniquely’ (Van Klaveren et al., 2023) is one of the ways to describe it. This allows one to build upon their own memories and perceptions; subsequently making art experiences highly individual. It may also involve the ability to come up with new ideas and designs (Van Klaveren et al., 2023).

### ***Conceptualisation***

This strategy allows for the categorisation, classification, and valuation of art to make sense of it using schemas that can be conveyed through language (van Heusden, 2015). Categorising art directs perception, and guides our understanding of its purpose (Seeley, 2020). Seeley (2020) suggests that categorisation is usually based on classical definitions, similarities, or knowledge, which in return helps us to interact with the world more efficiently. To illustrate, what one considers art or not can alter their experience and willingness to engage in it (Wagener, 2018). It may also display belongingness in certain groups that may encourage one to value its meaning (van Klaveren et al., 2023).

### ***Analysis***

Analysis employs perception, imagination and conceptualisation to effectively make

sense of art based on perceptions, memories, and schema. It is how one relates art to the world and conceives value in it by attaching meaning. This largely revolves around exploring the motive behind the art in terms of its purpose (van Heusden., 2015; van Klaveren et al., 2023). It can also allow one to discover things about the world and the self (van Klaveren et al., 2023).

### **The Present Study**

This research study aims at introducing an interdisciplinary approach to understanding the sense-making process involved in artistic experiences, through a culturally-cognitive lens. Moreover, since emotions have the ability to impact the way humans make sense of art through perception (Chrea et al. 2009); the imagination of situations (Stamatopoulou, 2004); conceptualisation (Wagener, 2018); and analysis (Gerger et al., 2014) – the importance of studying the effect of emotions in semiotic strategies is vital. Consequently, leading to the research question of this study: “What is the role of emotions in semiotic strategies used in artistic experiences?”

This study aims to test the following hypotheses:

Hypothesis 1: There is a significant difference in the emotional intensities between the strategies of Perception, Imagination, Conceptualisation and Analysis.

Hypothesis 2: Perception elicits the most emotional intensity and expression of emotions, followed by Imagination, Conceptualisation and then, Analysis.

### **Methods**

Considering the multiple interconnected factors involved in artistic experiences, both a qualitative and quantitative lens for collecting data was employed. The purpose of this type of mixed research design was to encapsulate the experience of art in a comprehensive and

naturalistic manner, especially since it is an inherently complex, intuitive, diverse process involving various meanings and interpretations (Starr & Smith, 2021).

### **Participants**

This study consisted of thirty-six young adults (18 dyads or pairs) of 18 years or older (twenty-two males, fourteen females,  $M_{age} = 24.21$ ,  $SD_{age} = 7.58$ ), who voluntarily participated in the study. The study took place from May 1st to May 19th, 2023. The data was collected in either English or Dutch. 10 participants (5 dyads) were removed from the analysis because their data was in Dutch, and this specific study has considered only English data, subsequently using data from twenty-six participants. Participants were only screened for age (18+), all other demographic and cultural characteristics were not considered, as these variables were irrelevant to this study.

Recruitment of potential participants living in the north of the Netherlands took place through convenience sampling. Recruitment methods included – i) targeted advertisement via research panel website (SONA) aimed at first-year psychology students at the University of Groningen, Netherlands; ii) public advertisement on the communication/social media platforms (e.g.: Facebook, Instagram, LinkedIn, Twitter, Whatsapp group chats); and iii) flyer distribution at local centres for leisure, culture and educational activities (e.g.: Groninger Museum, Forum, University buildings, UG Library, USVA, bookstores, literary cafes). Participants could choose a type of compensation – SONA credits, a Pimms Solutions gift voucher worth €10 or a donation of €10 to schools for cultural activities.

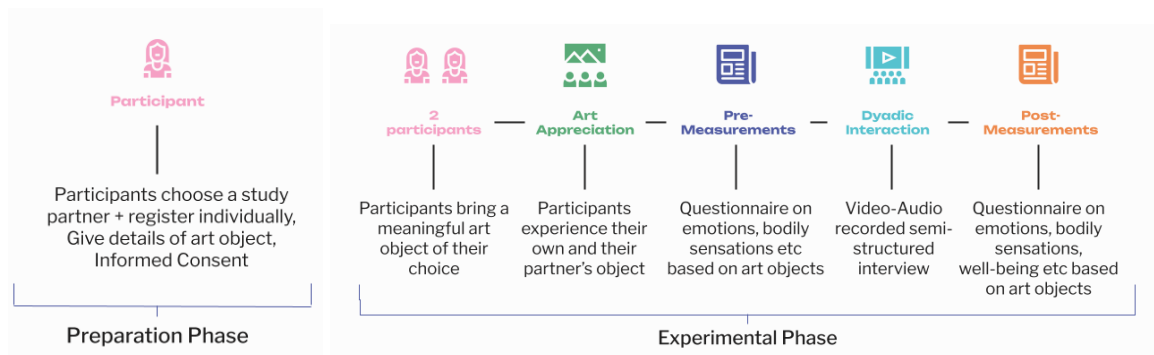
The study was approved by the Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Groningen (PSY-2223-S-0252) and was conducted according to the Dutch ethical standards for scientific research.

## Procedure of Data Collection

A mixed and multi-method approach was employed - therefore, both qualitative and quantitative data were gathered in multiple ways. Participants were instructed to bring a meaningful art object with them. They took part in the experiment as a pair/dyad to observe their art objects and talk about art (herein described as ‘dyadic interaction’) and filled in pre and post-dyadic interaction questionnaires individually. The experiment was divided into two phases – the preparation phase and the experimental phase. Throughout the experiment, one researcher stayed in the room to instruct the participants and answer questions. Figure 1 illustrates an overview of the data collection process.

**Figure 1**

*Overview of Data Collection Process*



### *Preparation Phase*

Prior to the data collection, potential participants were given information about the study and were instructed to sign up with a known peer of their choice on mutual agreement. They were each asked to bring one meaningful art object such as a painting, photograph, film scene, song, favourite book or poem - created by anyone, in digital or physical form, to the

experiment location. They were instructed not to reveal their art objects to each other before the experiment, and to not bring anything that could potentially upset the other person. Items that could not be brought physically to the location were submitted digitally through an online form to the researchers in advance, for later use in the experiment. At this point, informed consent was obtained - digitally via email or on location via a Qualtric survey.

### ***Experimental Phase***



In this part of the experiment, participants/each dyad took part in experiencing their and their peers' art objects, filled in questionnaires and had a dyadic interaction to discuss the art objects. Upon arrival, each dyad was taken to a room to be seated together. This was followed by 'art appreciation' where each participant individually experienced their and their peer's art object for a minimum of twenty seconds to a maximum of two-and-a-half minutes. The order for this was controlled for by randomisation. These experiences involved watching a film scene, observing a painting or listening to a song etc. After this, participants filled out a (pre) questionnaire online via Qualtrics on a tablet for both their and their peer's object. This consisted of i.) Questionnaire 1 (Q1) on media preferences (Van Klaveren et al., 2023); ii.) Questionnaire 2 (Q2) on semiotic strategies (Van Klaveren et al., 2023); iii.) Geneva Emotion Wheel (GEW) (Sacharin et al., 2012); and iv.) Bodily Sensation Maps (BSM) (Schino et al., 2021). Upon completion, the items were swapped and the same process was repeated, starting from the art appreciation. Figure 2 shows these self-report tools.

### **Figure 2**

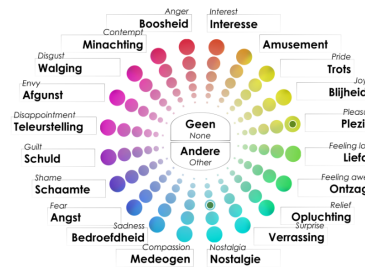
*Some of the Self-Report Tools Used in the Questionnaire.*

ii.)

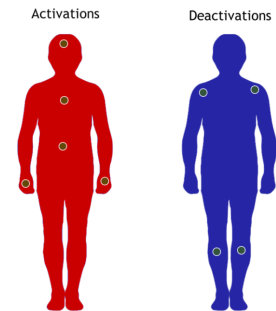
This artwork invites me ...

					
... to observe: touch, smell, taste or listen to it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... to feel or experience things.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
... to be in a different world.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... to express myself in my own way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
... to come up with new ideas or designs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
... to share an idea or story.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... to value its meaning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
... to show to which group/community I belong.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

iii.)



iv.)



This was followed by the audiovisually recorded ‘dyadic interaction’ where participants were instructed to stand up and converse about both the art objects they had just experienced using prompts as guidance. Each prompt was displayed on a screen and was timed for two to three minutes. The entire interaction lasted a minimum of ten minutes up to a maximum of twenty minutes. Both art objects were placed on a table during the interaction, where they could be engaged with, if necessary. The lapse of twenty minutes or discussion of all the prompts marked the end of the interaction. Then, the recordings were stopped and the participants were asked to take a seat again. Next, the participants were instructed to fill out the (post) questionnaire, consisting of Q2, GEW, BSM, Generalized Anxiety Disorder (GAD-7) (Spitzer et al., 2006), Patient Health Questionnaire (PHQ-9) (Kroenke et al, 2001), Personality Attributes Questionnaire (PAQ-8) (Tibubos et al., 2022), and the Big Five Personality Test (BFPT) (Denissen et al., 2008).

### Instruments

The overall study measured several variables quantitatively, however, some are inapplicable to this study’s goals, hence the only relevant instrument - the GEW, will be

addressed. Although Q2 is relevant to this study, semiotic strategies were measured qualitatively through the dyadic interactions and hence its assessments were not considered.

### ***Geneva Emotion Wheel (GEW)***

The GEW, (Figure 2 (iii)) developed by Sacharin et al. (2012), was used to measure emotions in response to art experiences, and was available in both English/Dutch. In the past, it has attested to be useful in identifying the type and strength of the emotions experienced from encounters with artworks in museum studies (Schino et al., 2022). In GEW, emotions are systematically aligned in a circle, consisting of twenty emotion families of interest, amusement, pride, joy, pleasure, feeling love, feeling awe, relief, surprise, nostalgia, compassion, sadness, fear, shame, guilt, disappointment, envy, disgust, contempt, and anger (Scherer, 2005). Each emotion was measured on three dimensions: valence (positive and negative), control (high and low), and intensity (high and low). In the centre of the wheel, the response options of “no emotion” and “other emotion” were also offered. In this study, only the ‘emotional intensity’ measurements were considered - hence, emotions were operationalised as ‘emotional intensity’.

### **Dyadic Interaction and Prompts**

The participants engaged in an audiovisually-recorded guided conversation about their items, for a minimum of ten to a maximum of twenty minutes to measure body language and speech content. The purpose of the conversation was to qualitatively measure how participants judged, related to, felt about and made sense of the items. During the conversation, eight prompts were presented. The prompts were based on emotions, semiotic strategies (i.e., perception, imagination, conceptualisation and analysis), and self-referential

patterns, to facilitate reflection (Appendix A). Examples of the prompts include, “What purpose do these artworks fulfil by being made in this particular way?”, “What do you think about what your friend brought?”, etc. This kind of interaction with a known peer was incorporated to encourage a naturalistic conversation of art and maintain a feeling of safety and intimacy during the experiment.

### **Technical Specifications**

There were two rooms used in the experiment, i.) experiment room - for the participants and the conduction of the experiment, ii.) control room - for the researchers to monitor the participants, and control the display screen and audiovisual equipment technically. The experiment room (Appendix B) had two chairs, two small tables, two tablets, a long table, a display screen, audiovisual recording equipment and a laptop and/or headphones (if necessary). This set-up facilitated a more comfortable and naturalistic setting for participants.

During art appreciation, tablets and headphones were provided by the researchers for art objects with audio/visual elements. For the questionnaires, tablets were provided by the researchers. During the dyadic interactions, for audio and visual recordings, a microphone and video camera (Logitech BRIO) were used respectively. For recording and processing of i.) the audio, softwares like AudioCapture and BrainVision were used, and for ii.) the video, LabRecorder was used. TeamViewer was also used to control and view the display monitor/screen in the experiment room from the control room. To keep track of time, a visual timer on a screen indicated the time participants had left for experiencing the object/discussing the prompt.



## **Data Analysis**

### ***Qualitative Data***

The audio recordings of the dyadic interactions were first manually transcribed and then coded. The overall study coded for several variables, however, for this specific study, only references to emotions and the four semiotic strategies were considered to assess the association between them and examine recurrent themes through thematic analysis. For semiotic strategies, predominantly the coding scheme by Van Klaveren et al. (2023) was used, however, it was developed more along the coding process as new words that aligned with the strategies were used by participants (Appendix C). For emotions, the scheme was adapted from Scherer (2005), Cupchick (2011), and Schindler et al. (2017). Furthermore, the coded analysis of guided interviews by Starr and Smith (2022), and the Cognitive Discourse Analysis (CODA, Tenbrink, 2014) were also sources of inspiration and guidance to form the general coding framework. Atlas.ti software (Version 23) was used as an annotation and coding tool.

### ***Quantitative Data***

Coyne et al.'s protocol (2020) was used to calculate the valence, control and intensity of each emotion selected by participants on the GEW. However, only the intensity of the emotion was considered, as measurements of valence and control did not align with this study's goals. Each participant provided four measurements of emotional intensity throughout the pre-and-post questionnaires, however, only the highest score from the post-questionnaire was assessed, as pre-questionnaire measurements were irrelevant to the use of semiotic strategies and the highest score was effectively more indicative of the maximum emotional

arousal that using a particular strategy potentially elicited in a participant post the dyadic interaction.

For statistical analysis, the non-parametric, Kruskal-Wallis H Test was conducted, as there were four independent categorical variables (four semiotic strategies) on a dependent ordinal variable (emotional intensity). To meet the assumption of independence of observations, only the dominant semiotic strategy for each participant was considered. This was determined by considering the most frequently coded strategy for each participant. The Post Hoc Dunn-Bonferroni test was also conducted to make multiple pairwise comparisons between the strategies.

## **Results**

### **Qualitative Data**

Through the analysis, it was found that the strategy of ‘Conceptualisation’ was the most commonly coded semiotic strategy accompanied by emotional expressions and the highest emotional intensity through speech (Figure 4). This was followed by perception, imagination and lastly, analysis. However, ‘Perception’ was the most dominantly-used strategy overall for participants (Figure 5) - implying that even though using perception did not evoke emotional expressions and emotional intensity, it was the strategy that was the most used by participants to make sense of art.

The themes from the thematic analysis that emerged were the following: i.) the role of personal relationships in finding meaning through the strategies of conceptualisation, ii.) categorising beauty through perception and conceptualisation, and iii.) the use of imagination to find others’ art objects meaningful. The concurrence of strategies of perception and

analysis was also observed. First, the results of each strategy will be presented, followed by the results of the themes mentioned above.

### ***Perception***

Perception was the second-most commonly coded strategy with emotional expressions. However, it was the most dominantly-used strategy to make sense of art in this sample. For this strategy, participants mainly referred to aspects of the objects that appealed to their senses of vision, hearing, touching, and feeling. Olfactory and gustatory appeals of any kind were not mentioned at all. To illustrate how perception enabled sense-making, the participants often used words such as “see”, “listened”, “touch”, “feel” and expressed it through statements such as, “It’s a silky-ish texture and you can feel the brushstrokes and the effort put into it”, or “it felt really nice to touch because it’s a type of a stone and it’s kind of cold...”.

Moreover, perception was often accompanied by statements of emotional expressions about the object as well. This is evident in statements such as, “It’s cathartic and I feel a lot of energy and I think it’s a beautifully constructed piece of music. It’s not just the lyrics, but the tempo, the instruments used, the two vocalists...”, and “At the beginning when I was reading it, I actually almost teared up... I felt that the letter was really heartfelt...”.

Multiple times, the coding for perception concurred with the coding for analysis.

### ***Imagination***

Imagination was the third-most commonly coded strategy with emotional expressions. It was also the third-most dominantly-used strategy to make sense of art in this sample. For this strategy, participants often built and/or recalled their memories and perceptions. It also involved perspective-taking to a certain degree, this was especially clear when discussing the

other person's art object. To illustrate how imagination enabled sense-making, the participants often used words such as "imagine", "remind", "perspective" and expressed it through statements such as, "I can imagine that sometimes it might not be easy to put those words down on paper", or "I can really imagine the type of story that he portrays in this song."

Participants accessed memories through imagination; this is supported by statements such as, "I think this brings back memories from that period of my life" and "It's just a way to get access to another period of my life and to another person... kind of a gate to something else". Perspective-taking was also an element of imagination; this is depicted in statements such as, "If I have to adopt your perspective, [...] it relates to ...".

Additionally, imagination was accompanied by statements of emotional expressions when participants narrated stories connected to the object. This is underlined in statements such as, "I connect happy memories to it because I was visiting my family there and we were having fun."

### ***Conceptualisation***

Conceptualisation was the most commonly coded strategy with emotional expressions. However, it was the second-most dominantly-used strategy to make sense of art in this sample. For this strategy, participants often referred to categories, ideas, and groups to describe how they related to it personally, and the purpose it holds in relation to the world based on definitions, knowledge and similarities. To illustrate how imagination enabled sense-making, the participants often used words such as "relate", "represent", "symbolise" and expressed it through statements such as, "You can tell by the fact that it's an international symbol of peace and everyone understands what it is about when they look at it - so simple and widespread", or "I think it represents how different I do feel to my home country..."

These statements were also accompanied by statements of emotional expressions such as, “For the earrings, I mostly feel joy and pleasure and it’s about feeling a part of the community.”

### ***Analysis***

Analysis was the least commonly coded strategy with emotional expressions. It was also not the dominant strategy for any participant in this sample. For this strategy, participants tried to conceive meaning by attaching value and finding its purpose in relation to the self and world. In certain instances, analysis was the output after processing all the other semiotic strategies. To illustrate how imagination enabled sense-making, the participants often used words such as “discover”, “meaning”, “express”. This is highlighted through statements such as:

“When my grandpa died recently, I randomly discovered the song... and I realised like, oh, it relates so much, like the feeling of having to say goodbye to someone but also not, because, they're a part of you that just stays with you.”

In addition, analysis was accompanied by statements of emotional expressions such as, “I would like people to look past the screaming and look into the meaning... cause it's meant for catharsis and screaming is a part of that [song]...”. Moreover, the concurrence of perception and analysis was also observed.

### ***Theme 1: The Role of Personal Relationships in Finding Meaning***

By employing the strategy of conceptualisation and imagination, participants accessed memories of meaningful relationships and transferred their feelings from those relationships onto the objects they’d brought - making the objects a symbol of the relationships. This is depicted through statements such as, “I think it means a lot to me because of my dad” and “I

relate to this because I know my boyfriend likes Lego and that's why it's beautiful to me as well”.

Furthermore, this type of association between the object and the related-person/group often arose expressions of emotions in participants. This is highlighted through statements such as, “I relate to it a lot more, especially because of what kind of meaning it has to my mom... [I mostly feel] nostalgia, and deep appreciation for my family... a sense of love and appreciation” or, “my grandma wrote it for me, so it's really positive things [that I feel]” or “I remember having the same feeling when I was a kid, supporting the same team and felt pride for accomplishments of the team”

### ***Theme 2: Categorising Beauty Using Perception and Conceptualisation***

Through the prompt that asked, “Do you find these artworks beautiful or not? And why?”, it was revealed that to assess ‘beauty’ participants usually employed the strategy of perception and conceptualisation for instance, “I like the colourings in it, like colour-wise, I think the colours just complement each other very well, and I like the kind of contrast of the skin tone... also, the kind of tranquillity that it expresses. It's just very beautiful to me.”

### ***Theme 3: Finding Meaning in Peers' Art Objects Through Imagination***

Participants tried to find a point of relatability and employed perspective-taking using imagination to recall memories, which consequently also triggered emotions. This is illustrated through:

“It's difficult when your sibling goes abroad.. and for me, I was only 12, so he moved quite early when I was growing up and, I never really expressed those feelings towards him... so when I read it (letter)... it reminded me a little bit of me... I am gonna tear up... (cries) [...] there's just so much love I can feel through this”

## Quantitative Data

### *Dominant Semiotic Strategy*

The findings (Table 2) reported that the most dominant semiotic strategy used by participants was ‘Perception’, followed by conceptualisation, and then, imagination (Figure 5). In this sample, analysis was not the dominant strategy for any participant. Consequently, analysis was no longer considered one of the independent categorical variables. However, the mean emotional intensity (EI) was the highest for Conceptualisation (0.933), followed by Perception (0.794), and then Imagination (0.716). This is clearly illustrated in Figure 4.

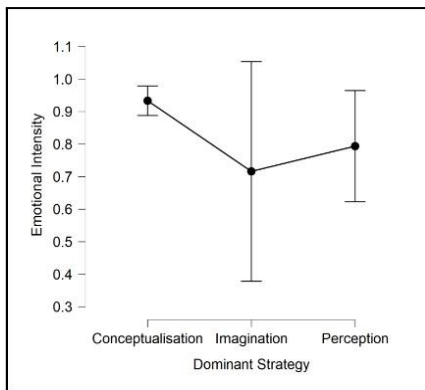
**Table 2**

### *Descriptive Statistics*

	Emotional Intensity		
	Perception	Imagination	Conceptualisation
Frequency	10	3	4
Mean	0.794	0.716	0.933
Std. Deviation	0.239	0.136	0.028

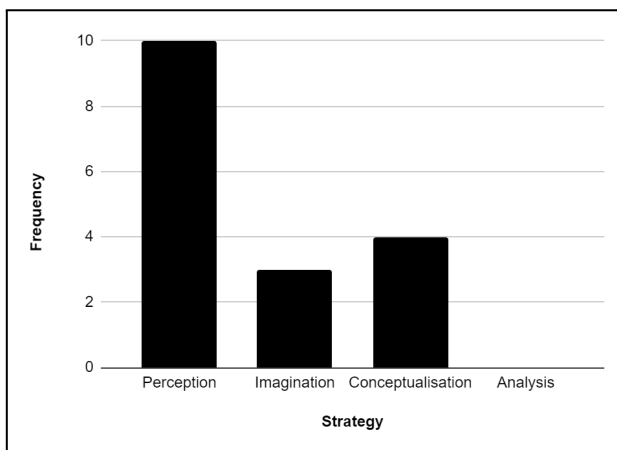
**Figure 4**

### *Descriptive Plot of Emotional Intensity and Strategies*



**Figure 5**

*Frequency of the Most Dominantly-Used Strategies*



***Semiotic Strategies and Emotional Intensity***

Table 3 displays the results of the Kruskal-Wallis H test, showing that there was no statistically significant difference in the emotional intensities between the different semiotic strategies with,  $\chi^2(2) = 2.768, p = 0.251$ . However, the  $\eta^2 = 0.173$ , indicating a large effect size. Thus, there was no evidence found in support of Hypothesis 1.



**Table 3***Kruskal-Wallis H Test*

Factor	Statistic	df	p
Dominant Strategy	2.768	2	0.251

Table 4 illustrates the Post Hoc Dunn-Bonferroni tests, which revealed that Conceptualisation was significantly more emotionally intense than imagination ( $p = 0.048$ ). However, there was no significant difference in the emotional intensities between conceptualisation and perception ( $p = 0.179$ ), and imagination and perception ( $p = 0.135$ ). Thus, there was no evidence found in support of Hypothesis 2 that favoured Perception.

**Table 4***Post Hoc Dunn Test*

Comparison	Z	W <sub>i</sub>	W <sub>j</sub>	p	P <sub>bonf</sub>	P <sub>holm</sub>
Conceptualisation - Imagination	1.664	11.750	5.333	0.048*	0.144	0.144
Conceptualisation - Perception	0.921	11.750	9.000	0.179	0.536	0.270
Imagination - Perception	-1.103	5.333	9.000	0.139	0.405	0.270

### **Discussion**

The participants' dyadic interactions on art were rich with discussions about topics surrounding family, friends, childhood, politics, and religion and oftentimes were supported with a variety of emotions such as awe, wonder, warmth, happiness, and love. This also hints at Dickie's (1987) suggestion of art being a circular phenomenon, that is bidirectionally influenced by its environment in an iterative sense. Also, it was fascinating to consider the emotions these discussions elicit. Although the evidence found was not statistically significant for the hypotheses, it is clear that 'Conceptualisation' was the strategy that evoked the most emotional expressions and emotional intensity, followed by imagination; even though perception was the most dominantly-used strategy for sense-making (without emotional expressions and emotional intensity).

It is possible that conceptualisation had this notable effect because most categories and symbols that were discussed were personal (e.g.: parents, war, siblings). O'Donnell et al., (2014) have also demonstrated how social relationships create meaning in life and influence emotions. Social relationships like these symbolised significance in the dyadic interactions; consequently, evoking emotions, to make these artistic experiences meaningful. However, the concept of 'meaning' in this context is unclear, because the interactions were not interrupted by researchers to clarify this. Nevertheless, this significant role of conceptualisation eliciting emotions and finding 'meaning' also aligns with and throws light on Pelowski's (2016) proposal of how emotions, evaluations and meaning-making may indeed be the three fundamental factors that encompass an artistic experience - factors that were all prominent in these findings.

In addition, the classification of beauty involved employing the perception, however, there were instances where participants emphasised how objects that may not be typically perceived as 'beautiful', are personally beautiful to them because of the 'story' and 'meaning' attached; implying that imagination and conceptualisation may also play a role in classifying beauty, and that beauty may go beyond its perceptual value. This is especially fascinating as in recent times, art has defied standards of perceptual beauty and incorporated semiotics to convey meaning, such as Maurizio Cattelan's 'Comedian' (2019). Additionally, using imagination to experience art objects from the perspective of the partner to find meaning could be explained by how humans empathise with each other using imagination to improve interpersonal relations (Gaesser, 2013).

Furthermore, it is likely that analysis was the least commonly used strategy because it is a higher-order cognition involving evaluative thinking which takes more processing time (Melvin, 2009). It is possible that participants may have not engaged in it due to the limited time of the experiment. Besides, an interesting trend was observed between the concurrence of perception and analysis; this could be a depiction of how first perception takes place that allows one to understand and find meaning in art through the activation of semantic modules (conceptualisation) (Moore & West, 2012). This highlights how the semantic strategies may serially progress from perception to imagination, conceptualisation, and then, analysis - in increasing cognitive abilities. However, the serial-like process of sense-making strategies can be researched in the future for a better understanding of the processes involved from a culturally-cognitive lens, as currently, the strategies were evaluated independently and do not take cultural studies into consideration.

Moreover, from a quantitative perspective, although the hypotheses were not supported by any significant evidence, the current findings provide intriguing results that can be further explored. Interestingly, conceptualisation was found to be more emotionally intense than imagination, and perception did not evoke as many emotions as expected. These findings are quite novel, as so far, artistic experiences have been studied from a more perceptual point of view, such as Pelowski et al.'s (2017) VIMAP, whilst the role and influence of schemas and social relationships in the sense-making of art have not been investigated enough. Moreover, these results are further strengthened by the qualitative findings, where themes of social relationships were prominent when conceptualisation was used. Consequently, as previously elaborated the salient role of social relationships and schemas through conceptualisation, may not only serve as an explanation for its significant difference in emotional intensities, but also, magnifies the relevance of investigating conceptualisation more in-depth, as it may provide the field of aesthetic studies a fresh perspective in the sense-making processes of art, that is not solely based on perception.

Overall, this study employs an interdisciplinary stance to explore the relationships between emotions, and semiotic strategies used in artistic experiences. Its multi and mixed-method approach enabled the assessment of several variables in multiple ways, both quantitatively and qualitatively; subsequently, providing a rich dataset. Moreover, to facilitate more organic discussions, the experiment room for the dyadic interaction was designed in a way that mimicked a naturalistic environment, such as a discussion with a friend on a couch. Also, participants were asked to bring their own art objects that held personal significance, and not engage with and/or experience those selected by researchers as done in past, which can be deluded in bias (Starr and Smith, 2022) – subsequently, these aspects enhance the

ecological validity of the study. Moreover, although the sample size was small for quantitative analysis, a sample size of twelve deems suitable for qualitative studies (Braun & Clarke, 2016).

However, it must be noted that the sample of this study predominantly consisted of young adults from the Netherlands. Besides, the participants' individual inclination towards art and their personal relationships with their study partners may have also influenced the dyadic interactions and arousal of emotions experienced. These factors suggest that the findings from this sample may not be entirely generalisable to other populations. Hence, in order to improve generalisability, a wider range of populations from different demographics, with both, known and unknown partners should be included. Moreover, in manual transcription and coding, it is likely that the researchers' personal bias in interpretation may have influenced the results. In future, to avoid such subjectivity, multiple researchers can evaluate the data to reinforce inter-rater reliability. Qualitative data for body language could also be analysed.

### **Conclusion**

Overall, this study provides a unique contribution and a preliminary framework from an interdisciplinary lens that embodies aspects of culture and cognition by using a multi and mixed-methods approach to examine the relationship between the role of emotions and semiotic strategies in artistic experiences. Evidently, the strategy of conceptualisation evoked the most emotional expressions and emotional intensity, followed by imagination, perception, and then, analysis. Perception remained the most dominantly-used strategy to make sense of art with/without emotions involved. These findings can be explained through the significant influence of social relationships, memories, sensory appeals and perceived purpose that

created meaning in participants' lives. The study's unique design facilitated naturalistic conversations that provided rich qualitative and quantitative data in an ecologically valid manner. Nevertheless, to increase the generalisability of this study, participants from wider demographics should be sampled, with known and unknown study partners, with varied qualitative data analysis. Lastly, the findings make novel contributions to the field of aesthetic studies by incorporating a psychological standpoint in conjunction with art studies, and highlight the importance of the semiotic strategy of conceptualisation and emotions in the meaning and sense-making process of art. This consequently initiates multiple opportunities for future research in semiotic strategies, the serially-oriented sense-making process and the role of social relationships in the sense-making process of art.

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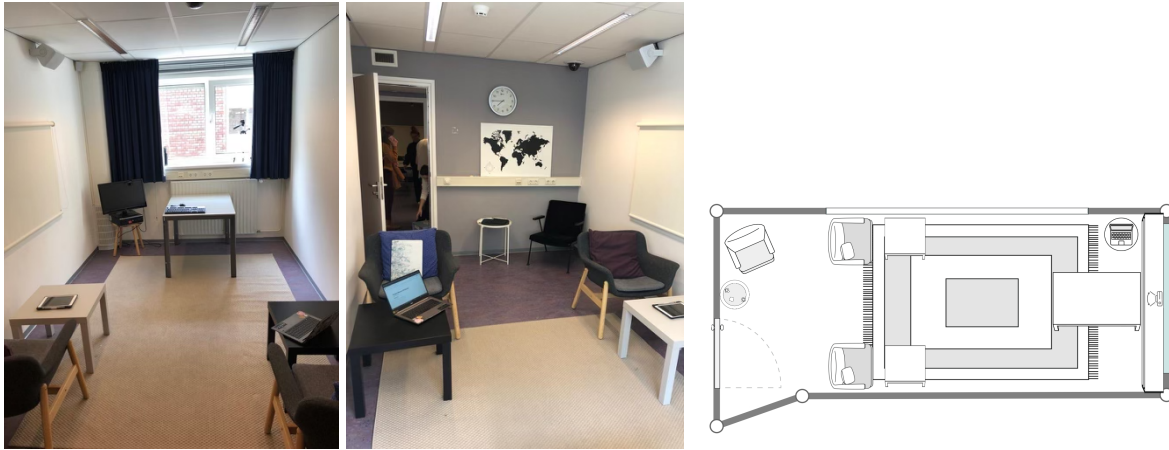
<https://doi.org/10.1093/oxfordhb/9780199988693.013.0017>

### **Appendix A - Prompts for the Dyadic Interaction**

1. Why did you decide to bring this artwork with you?
2. What do you think about what your friend brought?
3. How does observing, touching, smelling, tasting, or listening to these artworks make you feel?
4. Do you find these artworks beautiful or not? and Why?
5. In what ways do you relate to these artworks?
6. Could you please name what emotions you are experiencing as you talk about these artworks?
7. What purpose do these artworks fulfil by being made in this particular way?

8. What would you like other people to know about these artworks?

### Appendix B - Experiment Room Set-Up



### Appendix C - Coding Scheme for Semiotic Strategies

#### Perception

- recognize
- experience
- observe
- listen
- touch
- notice
- smell
- consider
- feel

#### Imagination

- design
- fantasize
- play
- pretend
- shape
- make
- create
- construct
- invent
- imagine
- idea, story
- new/unfamiliar/never experienced before world/scenario/situation
- wonder

#### Conceptualisation

- judge
- formulate
- name
- debate
- label
- categorize
- pronounce
- tell



- symbolise
- classify
- represents
- relate
- group/community/section of people/art

### Analysis

- research
- structure
- test
- search
- make connections
- analyze
- explain
- examine
- explore
- compare
- discover
- meaning
- in the world... / to other people...
- express