Decoding the Significance of Pepongoten Music: A Peircean Semiotics Analysis

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Abstract

Pepongoten is a part of the traditional wedding ritual in Gayo, an area on the highland of Aceh. Its manifestation is like a lament which is sung using pitches that are hugely different from western music and using a lot of specific ornamentals. Nowadays, this lament song is accompanied by Soleng Gayo (Gayo's traditional flute made of bamboo). Pepongoten as a lament song has a prepossessing symbol to study. This study intends to establish the symbolic meaning of the musical aspect of the Pepongoten tradition in Gayo by using the semiotics approach of Charles Sanders Peirce. The research shows that based on an analysis of Peirce's semiotic object aspects of Pepongoten music, the musical interaction between Pepongoten music and modern western music is shown by the Melisma icon (vocal technic), and the scale used. the character of the Gayo people is represented by the difference in the distance between the notes on the Pepongoten's song scale (interval) and the scales of modern western music.

Keywords: *Pepongoten; Semiotics; Charles Sanders Peirce; Music; Traditional*

Introduction

Gayo is an ethnic group that resides in the central highlands of Aceh province, located on the western part of Sumatera Island, Indonesia. The gayo people have their language, known as the gayo language, which belongs to the Acehnese-Chamic language family (Sidwell, 2009). The gayo people have a rich cultural heritage that includes a distinctive music tradition and art.

Gayo music is known for its beautiful melodies and poetic lyrics, and it is often performed on traditional instruments such as the rabab (a type of fiddle), the gendang (a type of drum), and the *Soleng* (a type of flute) (Miksic, 2011) and (Muazin et al., 2020). Gayo music is traditionally performed at weddings, funerals, and other important parts of the cultural identity of the gayo people, One of these arts is *Pepongoten* (Ocktarizka, 2018).

Pepongoten has been a tradition since the time of the Linge kingdom, at first *Pepongoten* was carried out in all traditional processions with the theme of separation as a form of expression of sadness

from the consequences of the separation, including the event of death. however, after Islamic teachings entered and were accepted by most of the Gayo people, the *Pepongoten* at the death ceremony was abolished because it conflicted with Islamic religious rules (Sembiring et al., 2019).

Pepongoten is a part of the traditional wedding ritual in gayo. LK. Ara, a poet, writer, and cultural actor of gayo art, describes the term of *Pepongoten* refers to the word pongot in the gayo language which means crying (Harfiandi et al., 2021). *Pepongoten* is a moment where parents can advise their sons and daughters who are married while for the married child, especially the bride, *Pepongoten* is an opportunity to apologize and vent her feelings of sadness for having to part with her parents. that feeling is conveyed by rhythmic crying to form a song which is currently a performing art in its appearance accompanied by Gayo *Soleng*.

As a piece of music, *Pepongoten* has a distinctive and very interesting uniqueness that makes it different from the music found in Aceh. This uniqueness arises from the use of tones that are significantly different from conventional tones in western music theory and musical ornaments in the melodies. This ornamental combination and distinctive tone shape the musicality of the Gayo people, especially children, as seen in schools when they sing the Indonesia Raya song at the flag ceremony every Monday morning. This uniqueness becomes a symbol that must be interpreted using a semiotics approach.

Semiotics is the study of signs and symbols and how they communicate meaning. It involves the analysis of how signs and symbols are used in various contexts and how they create meaning through relationships with other signs and symbols (Trifonas, 2015).

In music, semiotics is used to analyze how different elements of music create meaning. Elements such as melody, harmony, rhythm, timbre, and lyrics are all important in creating meaning in music. For example, the melody of a song can create a certain emotional response in the listener, while the lyrics can convey specific ideas or messages (Nattiez, 1990).

Semiotics can also be used to analyze the cultural and social meanings of music (Tagg, 1987). Music is deeply embedded in culture and society, and the meaning of a piece of music can be influenced by its historical and cultural context. For instance, a song that was popular during a particular historical period may have with it the social and political issues of that time (Sawyer, 1996).

Semiotics can also be used to analyze how music is used to create identity and group affiliation (Hernández Salgar & Romero, 2016). Music can be used to express and reinforce social identities, such as national or regional identity, gender identity, or subcultural identity (Tarasti, 2012).

Thus, semiotics provides a powerful framework for analyzing the complex ways in which music creates meaning and operates within cultural and social contexts (Way, 2017). By using semiotic analysis, we can gain a deeper understanding of the role that music plays in our lives and in our society (Halverson, 2010).

Peirce's semiotic theory provides a rich framework for understanding how music communicates meaning (Martinez, 2001). In this theory, semiotics refers to the study of signs and symbols and their interpretation, and music is viewed as a sign system that conveys meaning through various musical elements such as melody, harmony, rhythm, and timbre.

Peirce's semiotic theory consists of three primary categories of signs: icons, indices, and symbols. Icons are signs that bear a resemblance or similarity to the objects they represent (Kralemann & Lattmann, 2013). Indices are signs that are physically or causally linked to their referents. Symbols are

signs that are conventionally linked to their referents, with no inherent connection between the sign and the referent.

In music, examples of icons might include a melody that mimics the sound of a bird, or a chord progression that conveys a sense of tension and release (Monelle, 2014). Indices might include the sound of a drumbeat indicating a change in rhythm, or a shift in timbre signaling a change in mood. Symbols might include the use of a particular chord progression to signify a particular emotional state, or the use of a certain melody to represent a particular character in a musical narrative.

Peirce's semiotic theory also includes the concept of semiotic triads, which are composed of a sign, its object, and its interpretant. The sign is the physical or perceptual entity that represents the object, which is the thing or idea being represented. The interpretant is the mental concept or meaning that is generated by the sign and object (Turino, 1999).

Applying Peirce's semiotic theory to music requires careful consideration of the musical elements and how they are used to convey meaning (Martinez, 2001). For example, a particular melody might be used to represent a particular emotional state, but the specific emotional state conveyed will depend on the context in which the melody is used. Similarly, a particular chord progression might be used to signify a change in mood (Nattiez, 1990), but the precise meaning of the change will depend on the interpretant generated by the listener.

One study that applies Peirce's semiotic theory to music is "Musical Signification: Peirce's Theory Applied to Contemporary Music" by Eduardo Miranda (2003) (Miranda, 2003). In this study, Miranda analyzes how musical elements such as melody, harmony, and rhythm are used to convey meaning in contemporary music. Miranda concludes that Peirce's semiotic theory provides a useful framework for understanding the complex ways in which music communicates meaning.

Another study that applies Peirce's semiotic theory to music is "Peircean Semiotics and the Analysis of Jazz Improvisation" by Ole Kuhl (2004) (Kühl, 2007). In this study, Kuhl applies Peirce's semiotic theory to the analysis of jazz improvisation, demonstrating how various musical elements such as pitch, rhythm, and timbre are used to convey meaning and create a sense of coherence in improvisational performances.

In conclusion, Peirce's semiotic theory provides a rich and nuanced framework for understanding the complex ways in which music communicates meaning (Inskip et al., 2008). By carefully analyzing the various musical elements and how they are used to convey meaning, we can gain a deeper appreciation of how music impacts our emotional and cognitive responses.

Methodology

Qualitative research is an approach that seeks to understand and interpret the subjective experiences and meanings of individuals within their social and cultural contexts (Fossey et al., 2002). It involves collecting and analyzing non-numerical data such as narratives, observations, and images. Qualitative research methodology using interviews and literature review with a semiotic approach, particularly from a Peircean perspective, is a method of inquiry that involves interpreting and understanding meaning and communication within a particular context. This approach is often used in social sciences, including anthropology, sociology, and communication studies, to explore how individuals, groups, and cultures make sense of their world and the messages they send and receive (Given, 2008). In this study, I use qualitative research with Peircian's semiotics analysis in studying the

experiences of artists, using primary data from Informant who is the actor of *Pepongoten* as *Soleng* Gayo player, and secondary data obtained from literature and document review.

Peirce's semiotic theory emphasizes the importance of signs, which are anything that stands for something else (Semetsky, 2005). In this approach, communication is seen as a process of making and interpreting signs, and meaning is created through the interaction between the sign and the context in which it appears.

The first step in conducting a qualitative research study using this approach is to identify the research question and the research object (Ritchie & Lewis, 2003). The next step is to gather data through in-depth interviews with participants, which are often recorded and transcribed. The goal of the interview is to explore how the participants perceive and interpret signs in their daily lives, as well as how they understand and communicate with others. Primary data is first-hand data collected by researchers from the source of the research. In this case, the primary data we will use is data obtained from interviews with artists of *Pepongoten*. Interviews are a popular method of data collection in qualitative research as they allow researchers to gain in-depth insights into the participants' experiences, beliefs, and perspectives (P. Gill et al., 2008). Through interviews, researchers can ask open-ended questions that encourage participants to elaborate on their responses, providing rich and detailed data that is valuable for analysis.

The data collected from the interviews are then analyzed using a semiotic approach, with a focus on identifying the various signs and symbols that emerge from the participants' narratives (Leech & Onwuegbuzie, 2008). This analysis involves identifying the various types of signs, including icons, indices, and symbols, and examining how they are used in the participants' communication.

In addition to the interview data, the researcher will also conduct a literature review to explore existing research and theories related to the research question. The literature review can provide valuable insights into the broader context in which the research question is situated, as well as the theoretical frameworks that can be used to guide the analysis. Secondary data, on the other hand, is data that has been previously collected by someone else and is now being used by a researcher for a different purpose. In this case, the secondary data we will use is data obtained from literature and document review. A literature review involves a systematic search and analysis of relevant academic literature, while a document review involves analyzing documents such as policy papers, reports, and other written materials that are relevant to the research question.

Once the data has been collected and analyzed, the researcher will write up their findings, which can take the form of a narrative, thematic analysis, or discourse analysis. The findings will typically provide insight into how the participants interpret and communicate signs within their particular context, as well as the broader cultural and social processes that shape their communication practices.

In conclusion, qualitative research methodology using interviews and literature review with a semiotic approach, particularly from a Peircean perspective, is a valuable method for exploring communication practices and meaning-making processes in various contexts. It offers a framework for understanding how individuals and cultures make sense of their world and how they create and interpret signs to communicate with others.

Results and Discussions

1. Icon

In the philosophy of Charles Sanders Peirce, an icon is a sign that represents its object through similarity or resemblance to that object. Icons are often thought of as visual representations, but they can take many forms, including sounds, gestures, and other sensory experiences.

In the context of the music field, there are many examples of icons that can be understood in terms of Peirce's theory. One classic example is the use of musical notation to represent a melody. The notation is an icon because it resembles the sound of the melody it represents. When a musician reads the notation, they can mentally hear the melody in their mind's ear, thanks to the similarity between the notation and the sound. Another example of an icon in the music field is the use of album art to represent a musical work. The artwork on an album cover is an icon because it resembles some aspect of the music contained within the album. For example, an album cover might feature a photograph of the band performing, which iconically represents the live performance of the music. Alternatively, the artwork might depict a scene or image that is thematically related to the music, such as a landscape or abstract design.

In addition to these examples, there are many other ways in which icons can be found in the music field. For example, a music video might use imagery that iconically represents the lyrics of the song, or a piece of sheet music might include annotations that iconically represent how a particular passage should be played.

Overall, the concept of the icon is a powerful tool for understanding the many ways in which signs can represent objects in the music field. By recognizing the iconic relationship between signs and objects, we can deepen our appreciation for the artistry of music and the many ways in which it can be communicated and understood.

In this study, I analyzed *Pepongoten* music which was played back using the Gayo *Soleng* used by the muazin, the performer of the *Pepongoten* culture when accompanying the *Pepongoten* ritual. From the measurement results using the Android spectroid application, it was found that the tones were very different from the pitch found in conventional music. This difference shows the peculiarity of *Pepongoten* music so that it sounds different from all the music found in Aceh. The following are the results of measurements and comparisons with conventional musical tones.

Table 1. Frequency Comparison measured by Spectroid

Tone	Conventional In Hertz	*Soleng* Gayo In Hertz
c1	261,624	404
d1	293,664	454
e1	329,624	510
f1	349,232	541
g1	391,992	607
a1	440	682
b1	493,88	766
c2	523,248	808

From the data in table 1, it can be seen that the pitch of Gayo *Soleng* is much higher than the pitch of conventional music scales as agreed at the music congress in London in 1955.

1.1 Pitch Center

The pitch center, also known as a tonal center, refers to the primary or central pitch around which a piece of music revolves. It is the pitch that sounds like "home" or the pitch that the listener's ear is most drawn to, and it provides a sense of stability and coherence to the music. The pitch center is closely related to the concept of the key in music, which is the set of notes that form the basis of a piece of music. The pitch center is the most important note in the key, and all other notes and chords are organized around it.

In Western music, the pitch center is often the tonic, which is the first note of the scale. For example, in the key of C major, the pitch center is C. However, in other musical traditions, such as Indian classical music or Arabic music, the pitch center may be a different note, and the concept of the key may be different as well. Determining the pitch center of a piece of music can be done by listening for the most frequently occurring note, or the note that seems to provide the greatest sense of resolution and stability. Often, the pitch center will be established early in the piece and reinforced through repetition and the use of chords and harmonies. Understanding the pitch center of a piece of music can help musicians and listeners to better appreciate its structure and form and can aid in analysis and performance. By identifying the pitch center, musicians can more easily recognize and interpret the patterns of chords and melodies in the music and then use this knowledge to create more effective and expressive performances.

Based on Nettl's opinion (Nettl, 1964) in Theory and Method in Ethnomusicology to be able to understand pitch center seven things must be identified, namely: the most used tone, the earliest and the last tone, the lowest and middle tone, the distance between pitch or interval, accentuation, and artist's sense of familiarity with the song. The results of my observations of the seven aspects are shown in Table 2.

Table 2. Pich Center

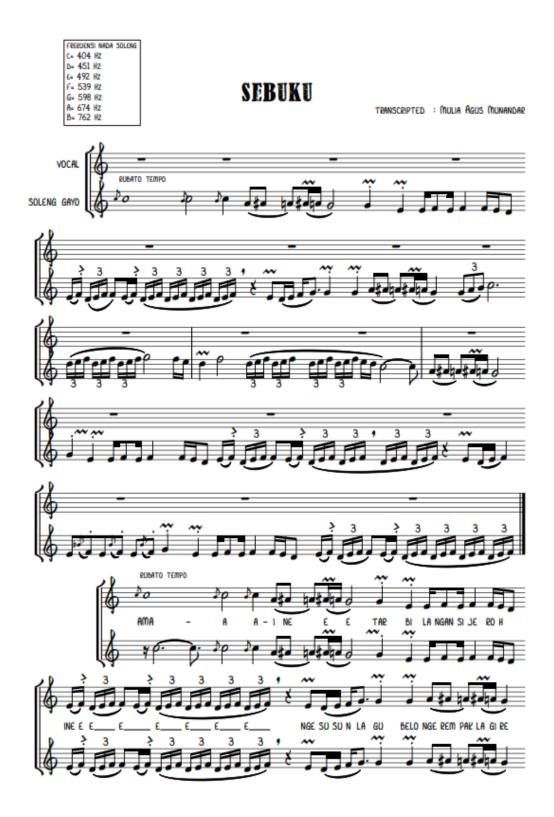| Number	Criteria	Tone
1	The tone most often used	e
2	The tone with the greatest Rhythmic duration	c
3	The first tone and the last tone	c – f
4	The lowest tone	d
5	The tone used with its octave	d, e, f, g
6	Accentuated tone	c
7	Artist's opinion	c

1.2 Sheet Music

Figure 1. Score of Pepongoten

1.3 Cadence Pattern

The coordination of harmony, voice-leading, rhythm, and meter results in the emergence of cadences, which are complex and interdependent elements that cannot be easily separated. As a result, schema theory has been used to explain their relationship (Gjerdingen, 2007; Temperley, 2004). In music, the cadence is a point where there is a sense of a brief or complete pause (Robert Ottman, 1970). Defined it as the location that provides such a feeling. Typically, cadences involve two chords in sequence. There are two main types of cadences: authentic cadences, which use both tonic and dominant chords (V-I, I-V, v-I, i-v), and plagal cadences, which use both tonic and subdominant chords (IV-I, I-IV, iv-I, i-iv).

Understanding the pitch center of a piece of music can help musicians and listeners to better appreciate its structure and form and can aid in analysis and performance (Jackendoff & Lerdahl, 2006). By identifying the pitch center, musicians can more easily recognize and interpret the patterns of chords and melodies in the music and use this knowledge to create more effective and expressive performances (Temperley, 2001).

Figure 2. Cadence Pattern 1

Figure 3. Cadence Pattern 2

2. Index

Peirce's semiotics has been applied to a wide range of fields, including music. The concept of the index, in particular, is especially relevant to the study of music (Martinez, 1996). Firstly, music is often described as a form of communication (Gray et al., 2001), in which a message is conveyed from the composer or performer to the listener. According to Peirce, an index is a sign that points to its referent through some kind of causal or spatiotemporal relationship (Knappett, 2002). In music, this relationship can be seen in the way that sounds are created and experienced in time and space. For example, the sound of a guitar string being plucked (an index) is directly caused by the musician's action, and its sound is experienced in the physical space in which it is played. Similarly, the sound of a drum being struck is also an index, pointing to the action of the drummer and the physical space in which the drum is located.

Furthermore, music is often composed and performed in specific cultural contexts, and thus the sounds that make up a piece of music can act as conventional indexes, indicating a specific cultural or historical meaning (Davies, 2001). For example, the sound of a violin playing a melody in a Western classical music piece can be seen as a conventional index for a particular cultural tradition, while the sound of a taiko drum in a traditional Japanese piece can be seen as a conventional index for a particular historical period and cultural tradition.

Moreover, Peirce's semiotics also emphasizes the importance of context in the interpretation of signs (Radford, 2006). In music, this can be seen in the way that the sounds produced by a musician are interpreted concerning the other sounds in the piece, as well as the cultural and historical context in which it is performed (Blacking, 1973). For example, a dissonant chord in a Western classical music piece may be interpreted differently depending on its context within the piece and the cultural expectations of the listener.

Finally, Peirce's concept of the index in music can also be related to the way that music can evoke emotions and mental images in the listener (Taruffi & Küssner, 2019). In this sense, the sounds that make up a piece of music can be seen as natural indexes that point to the emotional and mental states that they evoke in the listener (Marisi, 2021).

Peirce's concept of the index in semiotics is significant in the field of music, as it highlights how the sounds that make up a piece of music can act as signs that point to their referents through a causal or spatiotemporal relationship. Understanding the role of the index in music can help us to better understand how music communicates meaning and emotion to the listener.

Music that uses scales with seven tones is very common in many different musical traditions around the world (K. Z. Gill & Purves, 2009). These scales are often referred to as heptatonic scales, and they are comprised of seven distinct pitches or notes per octave (Clough et al., 1993). One of the most well-known heptatonic scales is the major scale, which is used in Western classical and popular music, as well as many other genres (Ravindran et al., 2009). The major scale is made up of seven notes: the root, second, third, fourth, fifth, sixth, and seventh, and it is characterized by its bright and cheerful sound (Sethares, 2005).

Another heptatonic scale that is widely used is the minor scale, which is also used in many different musical traditions. The minor scale has a darker, more melancholy sound than the major scale, and it is often used to create a sense of sadness or tension in music (Sethares, 2005).

Many other heptatonic scales are used in various types of music, including the Dorian, Phrygian, Lydian, Mixolydian, and Locrian scales (Hillen, 2023). Each of these scales has its distinct character and sound, and they are often used to create different moods and emotions in music (Rechberger, 2018).

Pepongoten which uses seven notes in its scale shows that there has been an interaction between traditional Gayo music culture and modern conventional music rules. Although the pitch of these notes is very different from the pitch of modern western music (Mulia Agus Munandar, 2022), the scale system is arranged at almost the same intervals. the significant difference is found in the interval from the tone e to f which is 31 hz away so the second minor impression is almost non-existent. if it is translated at intervals of 1 and 1/2, then the 31 Hz distance is almost 3/4 of the interval.

The difference in the distance between the notes on the *Pepongoten* musical scale shows the strong character of the Gayo community and is different from the others. Gayo people are reluctant to call themselves Acehnese even though Gayo is geographically located in Aceh Province. Until 2020, the author finds that there is still a spirit to separate itself from the Aceh province with the name Aceh Leuser Antara (ALA) province (Bahagia, 2020).

The singing technique in *Pepongoten* music more often by using melisma, which is a vocal technique that uses many tones for one syllable. Melisma (or melismatic singing) is a musical term that refers to the technique of singing multiple pitches on a single syllable or vowel sound. In other words, a melisma is a group of notes that are sung on one syllable of a word (Johnson et al., 2014).

Melisma is commonly used in various music styles, such as opera, gospel, and R&B (Metzer, 2012). It is a way to add ornamentation, expressiveness, and variation to a melody (Palmer, 1996). A well-known example of melisma is the vocal runs and embellishments that are often heard in gospel music, such as in the music of artists like Aretha Franklin or Whitney Houston (Rischar, 2004). In classical music, melismatic singing is often used in virtuosic vocal music, such as in the works of Handel, Vivaldi, or Mozart (Derham, 2018). This fact is another piece of evidence indicating the interaction of *Pepongoten* music with modern western music.

3. Symbol

Peirce's semiotics is a philosophical framework for understanding how signs function in communication. In Peircean semiotics, a symbol is a type of sign that has an arbitrary relationship with its referent (Gorlee, 2022). That is, the symbol does not have a natural or necessary connection to what it represents, but instead, it is conventionally agreed upon by a community of users (Denzin, 2017).

In the context of traditional music, symbols are often used as a way of representing musical ideas or concepts (Teruggi, 2015). For example, sheet music is a set of symbols used to represent specific notes and rhythms that can be used to play a particular piece of music. These symbols have an agreed-upon meaning within a community of musicians, allowing them to communicate musical ideas to one another (Turino, 1999).

In addition to sheet music, symbols can also be found in other aspects of traditional music. For example, certain instruments may have symbolic significance within a particular culture or tradition, such as the bagpipes in Scottish music (Ronström, 1989). Similarly, certain musical motifs or themes may be used symbolically to represent particular emotions, ideas, or cultural values (Blacking & Nettl, 1995). Symbols play an important role in traditional music by providing a means of communication between musicians and facilitating the transmission of musical ideas and traditions across generations (Schippers, 2009).

The use of melismatic becomes a symbol that shows the meek character of the Gayo community in communicating. The melisma technique gives the impression of wailing imitating the sound of someone crying. according to Muazin, the informant as well as the performer of the *Pepongoten* ritual

culture as a Gayo *Soleng* singer, what gives the *Pepongoten* song a character like someone crying is the use of the interval notes found in the *Pepongoten* Gayo song's scale.

Musical sentences are also formed not based on the harmony that is formed as a result of a combination of Gayo *Soleng* tones and vocals but rather on the sense of pitch center and note that follows the rhythm of the vocals based on the length of the word. this shows that the main focus of the performance is the poetry that is sung which contains advice and outpouring of feelings addressed to those who hear the *Pepongoten*.

Conclusion

Pepongoten in the form of music when viewed from a semiotic perspective gives us an in-depth view of the culture of the Gayo people, because art is one of the elements of culture according to Koentjaraningrat (Koentjaraningrat, 2015). There are at least three aspects that can be captured from the *Pepongoten* performance based on the results of interviews with *Pepongoten* performers, Muazin, and document analysis, namely icons, indexes, and symbols.

The icon consists of scales, music transcription in the form of sheet music, music sentences, and a pitch center. The index consists of a scale that shows the distinctive character of the Gayo people which is different from the Acehnese in general, besides that it also shows that there has been an interaction between Gayo music and modern western music because both use a seven-tone system (heptatonic scale). The symbol is identified from the use of the melisma technique to imitate the sound of human crying, and the use of specific pitch intervals that are different from the intervals of modern western scales.

Further research is recommended to get a deeper picture of *Pepongoten*, for example, how is the system of doubling notes with octave intervals in this *Pepongoten* music. To get an overview of the representamen and its interpretant, further research is needed in the field.

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