

A melody through life: How human minds wander

Die Melodie des Lebens: Wie Menschen sich in ihren Gedanken verlieren

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Abstract

Recollection or remembering events while listening to music is mediated not only by the personal relevance of that music, but also by different aspects, such as concentration on the music, influences of the environment, and the momentary state of the human mind. To further clarify this phenomenon, my paper addresses the question: "How does personally relevant music induce certain individual memories, and what other factors are of importance?" By means of an interview, followed by an analysis of that interview, it may be demonstrated that the process of remembering cannot take place under certain circumstances, e.g., in the presence of inhibiting stressors. If there is no concentration and the listener is otherwise preoccupied, true remembrance will be inhibited. It is also possible that the situation in which a trigger is present does not allow for the recollection of autobiographical events. However, this inhibiting process is also necessary, since a lack of inhibition would result in constant remembering, and human minds would not be able to wander at all. It was also shown that the experience of music becomes a cultural experience, and that there is an association of music with extramusical events. For further investigations, research should focus on the situatedness of the recollection, since the recollection changes depending on the present situation in which the music is heard.

Keywords

change in life course; inner thoughts; personal life melody;

Zusammenfassung

Sich beim Hören von Musik an vergangene Ereignisse zu erinnern, wird nicht nur durch die persönliche Bedeutung der Musik, sondern auch durch verschiedene andere Aspekte beeinflusst. Zum Beispiel spielt die Konzentration auf die Musik eine Rolle, ferner Umwelteinflüsse und der momentane geistige Zustand der ZuhörerInnen. Um dieses Phänomen weiter zu erklären, beschäftigt sich dieses Manuskript mit der Frage: "Wie ruft persönlich relevante Musik eine bestimmte

individuelle Erinnerung hervor und welche anderen Faktoren spielen dabei eine Rolle?“ Durch die Analyse eines vorher geführten Interviews konnte gezeigt werden, unter welchen bestimmten Einflüssen der Prozess der Erinnerung nicht stattfinden kann, beispielsweise wenn inhibitorische Stressoren vorhanden sind. Wenn sich der Zuhörende nicht konzentrieren kann oder anderweitig beschäftigt ist, wird eine vollständige Erinnerung verhindert. Es kann auch sein, dass, obwohl ein Auslöser vorhanden ist, die gegenwärtige Situation keine Erinnerung zulässt. Dies scheint jedoch notwendig, da bei fehlender Inhibition das menschliche Gehirn gezwungen wäre, sich ständig zu erinnern, so dass das Abschweifen der Gedanken gänzlich unmöglich wäre, ebenso wie die Konzentration auf momentan wichtige Ereignisse. Es konnte auch gezeigt werden, dass die Erfahrung, die durch die Musik hervorgerufen wird, zu einer kulturellen Erfahrung wird. Ebenfalls interessant ist, dass ein Zusammenhang zwischen der Musik und einem zusätzlichem, situationsbezogenem Ereignis besteht. Weitere Forschung sollte sich darauf beziehen, welchen Einfluss die Situation hat, in der die Musik gehört wird, denn die Erinnerung ändert sich abhängig von der aktuellen Situation.

Schlüsselwörter

Veränderung über die Lebensspanne; innere Gedanken; Melodie des Lebens

1. A melody sets marker points through the course of life

Where have we come from? How did we get to where we are now? Marker points are needed when someone is travelling, e.g., hiking. Usually, landmarks such as mountains or trees serve the purpose of supplying orientation, especially if there is no discernible path that we intend to follow.

Applying this metaphorical image to our lives, we will have to admit that from birth, our personal journey has been guided or even determined by certain turning points or markers that help us remember aspects of our individual past. Because of this, we can even call these markers identification points, helping us to understand the individual route we followed to get to where we stand now: at the site of our own identity.

In his classic drama *The Glass Menagerie*, American playwright Tennessee Williams tells us: "In memory, everything seems to happen to music" (Williams, 1999, 1.1.8). The renowned Canadian songwriter Leonard Cohen, as well as other musicians and philosophers, believed that music comprises the emotional life of most people. People certainly have realized that music often helps them remember events in their lives, especially if certain pieces of music were connected with these personal experiences. Music adds a new, emotional dimension to memory, making it easier for us to remember past events when we listen to the music connected with them.

2. Music as an arena for memorizing

Memory is the means by which we draw on our past experiences in order to use this information in the present (Sternberg, 1999). In fact, human life is shaped and determined by memories. There are several types of human memory; for example, short-term memory, long-term memory, sensory memory, declarative memory, etc. But it is long-term memory — a psychological function that may assist with understanding of oneself throughout a lifetime (Cowan, 2008) — that relates to the research question: "How does personally relevant music induce certain individual memories, and what other factors are of importance?" One of the lifelong features of memory has been described in psychology as "autobiographic memory," which is the part of memory responsible for the storage of personally relevant recollections (Kupferschmidt, 2011). Yet the process of remembering specific personal aspects and episodes from the past can change, depending upon the situation in which the music is heard in the present. This effect will be stronger for people who have more life experience.

In his 1932 book, "Remembering," which explores the reconstruction of memory, Frederic Bartlett states that remembering is an active process in which information is retrieved and changed to fit into existing schemas. In his classic study of memory, Bartlett (1920 and 1932) asked British participants to re-tell a Native American legend called "The War of the Ghosts" multiple times. Due to their heritage, the participants were not familiar with the subject matter of the legend; the development of the story was also unknown to them. Bartlett found that the participants changed the story as they tried to recall it; each re-telling resulted in the loss of some elements and the adding of new ones, based on the individual's imagination (Wagoner, 2017). Likewise, depending on one's current

situational circumstances, a similar process of alteration could apply to episodes of the past that are recalled when one hears a certain piece of music.

According to Blood, Zatorre, Bermudez, and Evans (1999), music has the ability to induce remarkable emotions, despite the fact that unlike other stimuli such as smell and taste, music has no intrinsic biological benefit. In his work of 2008, Jäncke reported that the recognition of music and the emotions associated with it are processes that involve the whole brain. In order to elucidate the interaction between music and emotions, Baumgartner (1992) performed a study involving emotions that were evoked in 73 participants who were listening to music. According to Baumgartner (1992), the objectives of the study were to assess how readily people can remember personal experiences that are associated with a piece of music. The next step was the exploration of these autobiographical episodes and their musical trigger, and the circumstances in which these episodes had occurred. This was followed by comparing the original emotions the subjects felt when the occurrence took place with the emotions that were raised later on, when they listened to the same piece of music.

Baumgartner found that 70 of the 73 participants connected a personally relevant piece of music with an autobiographical event. He quoted Pratt's thesis that the individual's assessment of the character of music in general (and, by, implication, of a certain piece of music in particular) is dependent on "extramusical associations." Pratt (1931) differentiated between autonomous and heteronomous music, whereby heteronomous music is characterized by having non-tonal contents (e.g., extramusical associations). The character of autonomous music is due to its intrinsic properties only. According to Baumgartner (1992), this has been called "indexical representation" (e.g. by Pierce), which means that there are direct associations between a musical event and an extramusical event. As a consequence of this, it is necessary to explore and examine these "extramusical" events, i.e., to consider the situation, the environment, and the circumstances experienced when listening to the specific piece of music.

3. Personally relevant music and individual memories

As shown above, the connection of music and memories of personal experiences are established as fruitful areas for research.

For the point at issue in this project, memories of personal experiences have been identified as an interesting aspect. Therefore, in choosing a study participant, a person with a great deal of life experience was purposefully sought. In our study, memories described to an objective listener served as a means of allowing him to gain a better insight into the interviewee's experiences, his related emotions, and their effects on shaping aspects of his personality.

The topics addressed and discussed during the interview, after establishing informed consent, led to the development of this research question: "How does personally relevant music induce certain individual memories, and what other factors are of importance?" In preparation for the interview, both the subject (referred to here as "Hans," a pseudonym for the interviewee) and the researcher

listened to the relevant piece of music; the interview itself was structured by interview guidelines addressing questions like the following:

- What made you choose this song?
- In what kind of situations do you like to listen to the song and why?
- What did you think of when while listening to the song together?
- If possible: Could you describe the first time listening to the song?
- Which situation(s) is (are) associated with the song?
- What aspect of the song triggers this association?
- What emotions are associated with the song?

The questions were designed in an open manner, so as to allow the presentation of a narrative on the side of the interviewee. Several questions were prepared prior to the interview. Basically, the interview questions were directed towards when and why Hans had listened to this piece of music, and what kind of memories were evoked for him in those situations. The researcher also asked Hans whether emotions were raised in the course of listening, and if so, what kind.

To get an initial understanding of what music means to an individual, Hans was asked to bring a personally relevant piece of music to the interview session. Then both partners listened to the music, sitting at a desk while the piece was played once without interruption, and without their taking notes. After this, the recording device was switched on, and the interview was conducted and recorded for later transcription. For data acquisition and analysis, the interview was transcribed.

The person interviewed ("Hans") was a 65-year-old public servant who had been retired for a year. Hans stated that he was listening to music on a regular basis, mostly while doing other things, such as performing daily chores. Besides this, Hans claimed that he was not a musical person and did not play an instrument, although he revealed that his mother played the violin as a young girl.

The piece of music that provided the basis for the interview was the title song from the Western movie "Johnny Guitar" (1954), as sung by Peggy Lee. (This refers to the original version of the instrumental later released by The Spotnicks in 1962.) The lyrics describe the singer's romantic feelings for Johnny, and her desire to hear him play the guitar.

To analyze and evaluate the data at hand, the "Qualitative Content Analysis" of Philipp Mayring (2015) was initially applied. Due to the nature of the data, however, it did not seem feasible to use this method of analysis. Rather than separating what was said into context units, it was decided that the text should be looked at from a holistic viewpoint, and therefore should be analyzed step by step.

The most important quotes from the German text will be used as a reference, and combined with significant literature about the research question: “How does personally relevant music induce certain individual memories, and what other factors are of importance?”

In the following, the first recollection and a subsequent one are described.

The first recollection took place during a skiing trip Hans made to Austria more than 45 years ago with five or six college friends. During a long stretch of time spent waiting for these friends (approximately one hour), the song “Johnny Guitar,” as sung by Peggy Lee, was played on a cassette deck. The weather was sunny and warm for the time of year. This was the first time that the interviewee had heard the song.

The second recollection referred to a different occasion, when Hans and his best friend watched the movie of the same title in a public theatre. This classic Western, starring Sterling Hayden and Joan Crawford, was filmed in color and enjoyed great commercial success. The subject’s recollection was heightened due to the unusual nature of the drama: The hero, Johnny Guitar, plays the guitar to fight his enemies instead of using a gun.

These two recollections took place in very different situations, without the presence of inhibiting effects (meaning stressors that could affect later recollections); the subject’s mind was free to wander. The “extramusical event” as described by Baumgartner (1992) was either the prolonged waiting for his companions, or the visit to a cinema with a friend. In his article “The Sound of Music,” Zittoun (2016) describes how music can become a cultural experience when this listening takes place consciously. One of the implications for this is that an „awareness threshold” must be crossed while listening to the piece of music. The situations described in my interview enabled the listener to do exactly this, and therefore, the musical experience became a cultural experience. Zittoun also states that the background music one hears in an elevator or shopping mall does not lead to this transformation; while this music might be recognized, no memories or emotions will be connected with it, perhaps because it transforms rock and pop tunes into watered-down instrumental versions of the originals. This type of music is designed to stay very much in the background of the individual’s attention, and, furthermore, the accompanying action of standing in the elevator or buying cheese does not imprint on our memory.

Two other important passages of the interview show that the piece of music was played very often during the time flow, and that the music is still relevant to Hans, probably due to the strength of the three recollections described in the interview. The last of these was a situation in which Hans watched the film again on a miniature TV during an overnight stay as a truck driver.

All these recollections refer to normal situations and were triggered by listening to the music. Although Hans may have heard the song as many as 1,000 times, he has only these three recollections. The song has been relevant to him for approximately 45 years, probably due to these recollections. This trio of memories did not relate to situations that had an impact on his life. They were normal situations that occur every day, and did not involve his first visit to the cinema, nor his first overnight stay in the truck. They are simply recollections triggered by listening to this song.

These statements underline the importance of the situation in which the piece of music was heard, and the fact that listening to the music can lead to remembering three rather trivial events. My findings are again in line with the observation by Zittoun (2016); passing the awareness threshold leads to a connection between the music experience and the recalled situation and, therefore, to the transformation into a cultural experience.

Another important factor is that the piece of music reflects sentimental moods looking back at how the song was obtained and different events associated with listening to it. Remembering associated with this piece of music is only possible in calm situations where the mind can wander (i.e., no inhibiting factors): Hans often listened to the song in solitary or sentimental situations. The music is not that popular with others, and it reflects his personal taste in music. Depending on the circumstances, these recollections are not always present; for example, when driving a car. However, they might be present when listening to the music at home and looking out of the window.

This shows that in calm situations and due to the absence of other inhibitory influences (stressors), it is possible that the mind is free to wander.

Other passages of the interview also support this observation. It was stated that the emotions triggered by listening to this piece of music were sentimentality, solitary recollection, peacefulness, and harmony. Conscious and purposeful connections between music and situations are possible, but they are not as strong as the special recollections based upon emotions. This observation was also described by Zittoun (2016). The author reported that sounds can become music when we deliberately listen to them. Yet a musical experience can only result in a recollection if the awareness threshold is passed. During the time flow, musical experiences can also become a special moment as they are connected to other cultural events and experiences, which in turn are powerful enough to awaken personal memories and emotions (Zittoun, 2016).

See Appendix I for specific sections taken from the interview, which were identified as relevant for investigating the importance of music and memory.

4. Discussion: How minds wander

The results suggest that remembering instances closely related to the music is mediated not only by the personal relevance of that music, but also by different aspects of the listening experience. These may include concentrating on the music, and being in a calm and stress-free state of mind without outside influences, so that the mind can wander. Hans stated that by listening to the song and concentrating on it, special recollections were triggered, and other mental occupations became less important. He also confirmed that remembering associated with this music is only possible in calm situations where the mind can wander. It seems especially important for the mind to be able to wander off to these memories while not being otherwise preoccupied.

Figure 1 shows that the remembering process cannot take place under certain circumstances; for example, in the presence of inhibiting stressors. These inhibiting stressors cancel out the positive

factors: in other words, if there is no concentration and the listener is otherwise preoccupied, true remembrance cannot take place. It is also possible that the current situation in which the trigger is present does not allow for the recollection of autobiographical events. Yet this process also seems necessary, since a lack of inhibition would result in constant remembering, and the mind would not be able to wander any more.

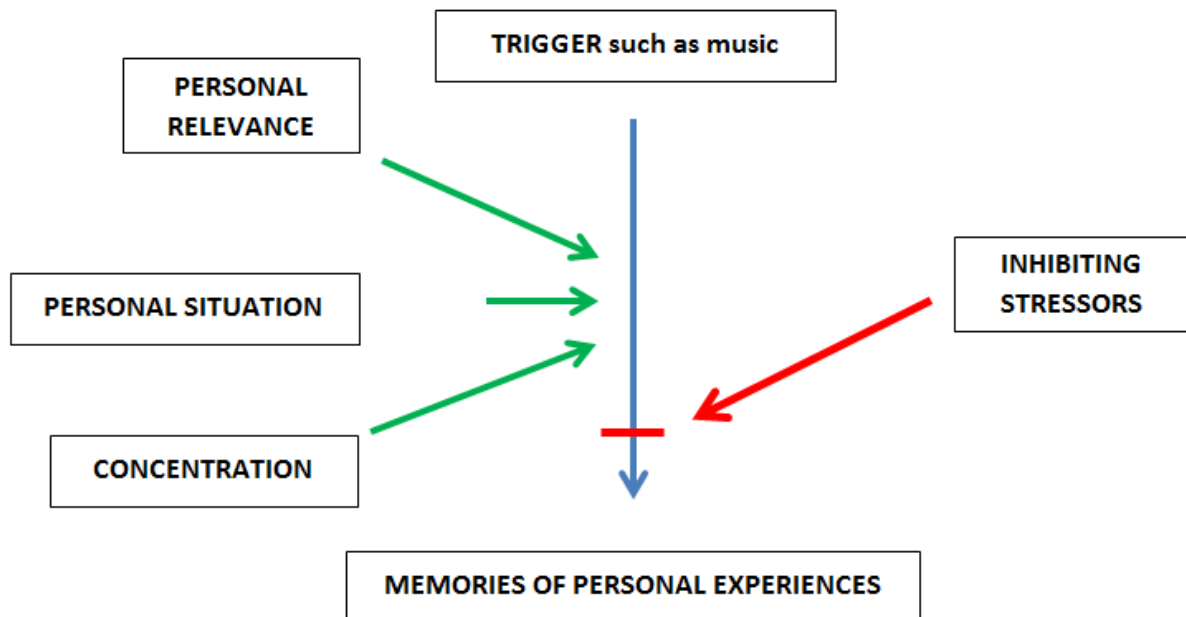


Figure 1: Triggers guiding recollection of significant life events

This concept of the “wandering mind” in connection with music could be an interesting topic for further studies investigating the relevance of music associated with relaxing moments in therapy. Special emotions are not only connected to the music, but also to the memories induced by the music.

Music is an essential aspect of cultural psychology, even though talking about music is a difficult task, in contrast to feeling into it (Valsiner, 2016). As mentioned above, crossing an awareness threshold connects the experience of music with cultural experiences (Zittoun, 2016). The connection of a musical event with some extramusical object or event allows emotions previously associated with the extramusical object to be associated with the music. According to Baumgartner (1992), “A happy piece of music could come to arouse sadness because of its association with a sad event.” The interview demonstrated that these “extramusical” events associated with a piece of music represented different situations that did not arouse either sadness or happiness. However, these extramusical situations allowed the mind to wander, since no stressors were present. To conclude, contemplation can be supported by listening to music, or even by playing and singing it. As a

consequence, the individual's mind will open up much more easily, and this will increase our understanding of the individual's emotions and personality.

5. Conclusion

The finding that music is important in solitary and sentimental situations might be connected with the fact that memories associated with this music are only possible in calm situations where minds can wander. This issue could also be investigated further, as there seem to be crucial circumstances that allow a person to truly recollect situations associated with the music, and also to experience their emotional and personal relevance. To address this issue, further theoretical background research should be considered.

Another point of interest is how people describe the music according to Pratt's (1931) notion of autonomous and heteronomous music, depending on the situation and personal remembrance. In the present research project, which is based on the statements of only one interviewee (without any musical training), such a thorough analysis of the iconic representation of "Johnny Guitar" could not be made. To do this, a thorough theoretical analysis of music with all its technical and physical indications would be necessary.

The individual's physical reaction to music seems to be another promising area of research, one that might also be connected to the situational aspect of remembering. How this physical reaction relates to music and how these physical reactions change depending on the situation should be addressed. For example: Are there certain behavioral patterns that are closely related to the personal remembrance and the music? Is it possible that an individual is not consciously aware of these patterns that are connected to the situation of remembering?

Another possible research project would be to identify stressors that prohibit people from recalling memories. In a clinical setting, this could possibly be counteracted by the Bonny method of guided imagery and music (GIM) (Bonde & Blom, 2016). It might also be possible to extend that method by introducing music that is known to the participants, and which might have a different effect on the retrieval of memories.

Compliance with ethical standards

The author declares that he has no conflicts of interest. All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

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Appendix I

Aspects mentioned in the interview that were identified as relevant to investigating the importance of music and memory.

- The song stands out from other music, possibly due to a more experienced life philosophy of the interviewee that is exemplified through the music.
- The song is still personally relevant today, because there were special situations that are connected to the song. "Ich habe danach das Lied noch tausend Mal wahrscheinlich gehört, aber keine spezielle Situation der Erinnerung mehr. Aber, wie ich schon sagte, das Lied mag ich seit ungefähr 45 Jahren, vielleicht eben auch deswegen, weil es solche Situationen gab, die mit dem Lied für mich verknüpft sind."
- The music is important in solitary and sentimental situations.
- The song reflects sentimental moods in looking back at how the song was first heard and different events associated with listening to it.
- Remembering associated with this music is only possible in calm situations where the mind can wander.
- The song was played very often and is still relevant, probably due to these three recollections.
- The three recollections refer to normal situations and are triggered when listening to the music.
- Emotions triggered by listening to the music are sentimentality, solitary recollection, peacefulness, and harmony.
- The interviewee remembered a science fiction story in which only specific music affects people the way it does.
- By listening to the song with concentration, special recollections are triggered. Other mental occupations become less important.
- Conscious and purposeful connections between music and situations are possible, but they are not as strong as the special recollections based upon emotions.