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Wertheimer's "Musik der Wedda"

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One Century of Gestalt Psychology

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1. The first record

The image displays a musical score for a vocal piece. It consists of three staves of music, each with a treble clef and a 4/4 time signature. The first staff is labeled 'Voice' and is divided into two sections, A and B. Section A contains the lyrics 'Mu - mia mamia ma - moi madey - ya' and Section B contains 'Mamia mamia mamoi madeyya'. The second staff begins with a measure rest marked '3' and contains the lyrics 'Ba - la - ba - he ko - tey - yo Ba - la - ba - he ko - tey - yo'. The third staff begins with a measure rest marked '5' and contains the lyrics 'Ku - tu - run ku - tu - run mi - a - ma Ku - tu - run ku - tu - run mi - a - ma'. The notes are primarily quarter and eighth notes, with some beamed eighth notes and slurs.

Voice

A B

Mu - mia mamia ma - moi madey - ya Mamia mamia mamoi madeyya

3 Ba - la - ba - he ko - tey - yo Ba - la - ba - he ko - tey - yo

5 Ku - tu - run ku - tu - run mi - a - ma Ku - tu - run ku - tu - run mi - a - ma

2. Musik der Wedda

This sample come from the first research by Wertheimer in ethnopsychology (1910) about the music of Wedda, a very primitive group of Ceylon.

It is a very important and neglected research, also in relation to the formation of *Gestaltpsychologie*.

Wertheimer analysed some material registered by A. Selenka in 1907.

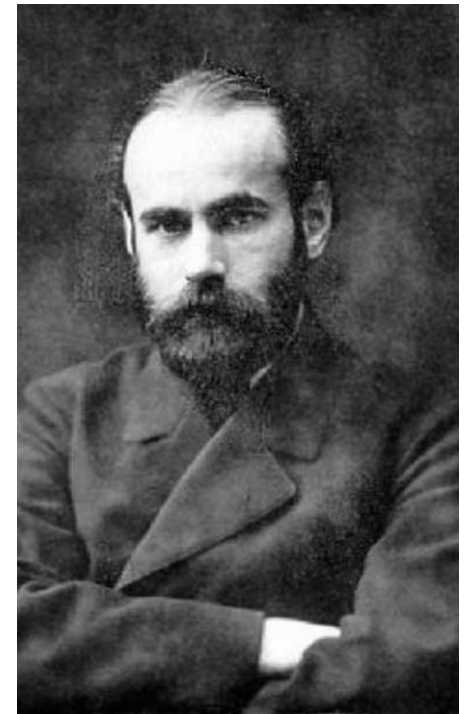


3. One step back

We celebrate here the centennial of the birth of Gestalt Psychology.

Indeed, one Century ago Max Wertheimer published his celebrated paper on phi phenomenon.

What is often neglected is that before Wertheimer carried on some ethnopsychological research, also important for the story of *Gestaltpsychologie*.



4. Berlin

We all know that in 1900 Wertheimer left Prague for Berlin, to study with Carl Stumpf

In the first years of staying in Berlin, among others, he followed four courses of an important musicologist, Max Friedlaender

For us, Friedlaender is important, because he was the greater student of folk music at the time in Germany.

In the '20s he established the *Deutscher Volksliedarchiv*,

We can safely argue that it is in this respect that he could influence Wertheimer.



5. The incubation

It is known that the years between 1905 (PhD in Würzburg with Külpe) and 1912 (publication of the *phi* paper) were for Wertheimer a period of relative silence.

Anyway, it was certainly a period of “incubation” (Mich. Wertheimer, 1990), and also of intensive work.

Wertheimer traveled in 'Europe, from Vienna (where was with Plözl and von Jauregg), to Prague (Gad) and Frankfurt.

They are also the years of the close linkage with the Sterns, and of the close friendship and collaboration with von Hornbostel.

6. Von Hornbostel

Von Hornbostel had a formation in music and chemistry.

Assistant of Carl Stumpf, from 1905 was in charge of the *Phonogramm-Archiv* of the Berliner Institut.

It is almost certain that Wertheimer was addressed to ethnology (and ethnomusicology) by him,

Among other things, Wertheimer and v. Hornbostel invented together in 1915 the *Wertbostel*, an apparatus to detect the spatial origin of sounds.



7. C. S. Myers

In 1911 two anthropologists, Seligman & Seligman, published an important monograph on Weddas:

The X chapter was written by C. S. Myers, on Wedda's music.

The sample on whom Myers analysed Wedda's music was collected by Seligmans, but the songs are almost identical to the ones collected by Selenka.

Myer's analysis was conducted independently from Wertheimer's one.

Both were unaware of the work of the other.



8. Myers' analysis

It's interesting to present Myers' analysis, to fully appreciate how different and innovative is Wertheimer's one.

First, Myers distinguishes the songs in three classes:

A. Songs with only two notes;

B. Songs with three notes;

C. Songs with four notes.

Inside each of this group Myers measures for each song a quotient between the number of vibrations respectively of the higher note and of the lower one.

Then, he measures in cents the intervals between the notes.

8. Myers' analysis

On this basis, he is able to subdivide further the groups.

Then, Myers makes some observations on the rhythm, noting that it is usually regular, but with several irregularities in the accents.

The lone really “structural” observation regards the presence of a *tonic* as a centre of gravity for each song.

Some interest have his observation on the intervals; according to Myers, the intervals among the Veddas appear to have been developed by the successive addition of small intervals to those previously used.

In most songs, there is an additional third tone that consists of approximately a semitone added above the whole-tone interval which starts from the tonic.

8. Myers' analysis

In conclusion, with Myers' analysis we are submerged with a huge amount of highly analytical data.

What is missing, is a more holistic vision of the materia.

The considerations made by Myers are often interesting, but qualitative in nature, and relatively independent from the elementistic analysis conducted by him.

9. Wertheimer's analysis

Wertheimer's analysis is quite different in scope, method, and depth.

What is clear, is that Wertheimer is very little interested in single "atomic" elements of the pieces (that treats only for descriptive purposes, but has a definite holistic approach).




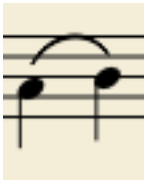

So, he shows how the songs use only a limited number of tones, or that the intonation is almost exactly 100 cents for half-tone, but his interest is focused on other matters.

10. Linkage text-melody

The first relevant observation is on the linkage text-melody. He notes that the single syllables have a beat value constant. So, *mamoi* is always $\frac{1}{4} + \frac{1}{4}$, but *kuturun* $\frac{1}{8} + \frac{1}{8} + \frac{1}{4}$. Each syllable, with the exception of the final, that is longer is always $\frac{1}{4}$ or $\frac{1}{8}$.

11. The conclusion

The conclusion has always one of this three possibilities:

1.  seldom  (65% of instances);
- 2..  or  (20%, always ascending);
- 3..  (15% per cent).

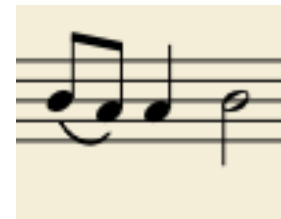
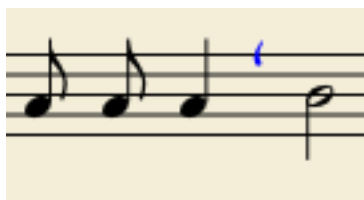
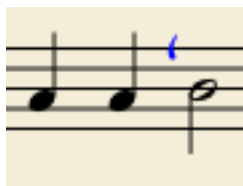
12. The pre-conclusion (*Schlußvorbau*)

Before the conclusion there is always one structure in two quarters (the pre-conclusion, *Schlußvorbau*).

In the texts, the last word of the verse is often trisyllabic, embracing pre-conclusion and conclusion.

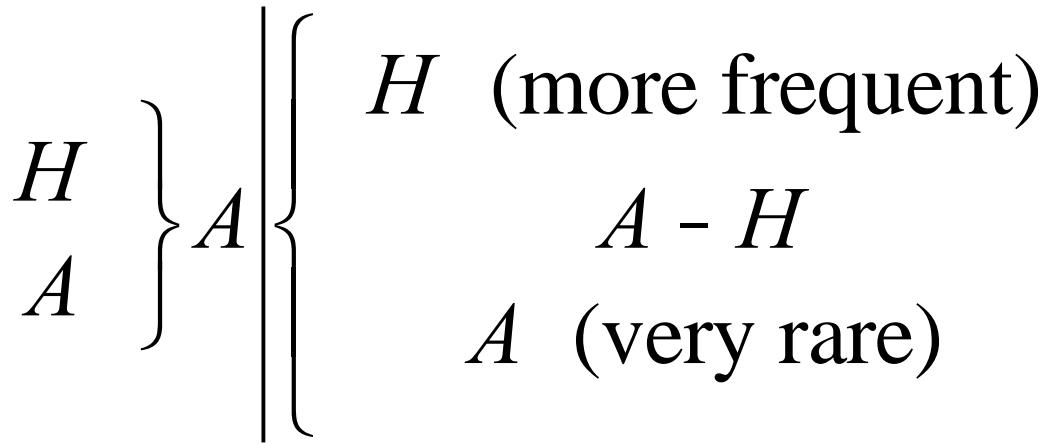
Usually is a pure A, sometimes a H-A always descending, never ascending.

So, the typical sequences pre-conclusion conclusion follow these main types:



13. The conclusive part

So, the entire conclusive part follows this scheme:



Notice that here there is never the higher tone of the song.
Notice also that the lower tone is in the *Schlußvorbau*.
In general, the H has the function of the fundamental.

14. The internal parts

Similar consideration could be done for the internal parts of the phrases.

In other words, there is always a fixed structure, that can undergo variations at their limits, but always in certain limits.

For example, in the song *mamia* we have never melodic variations, but ritmically we have qq or qrq, but never rqq.

15. The melody as a Gestalt

Very important is what Wertheimer says at this proposal (p. 305):

One can say that a melody is not given through certain intervals or rhythms, but instead is a *Gestalt*, which single parts own at their characteristic borders a free variability.

The melodic *Gestalt* is then characterized in negative (for instance, no variation).

16. Gestalt in this context

Of course, it would be unfair to force the meaning of the word Gestalt, as used in this context.

In this period, Gestalt (as Form) was largely used in a loose way, without giving to it a technical meaning.

But here, in the context of an analysis of a melody, what Wertheimer says recall immediately the criticism raised by authors like Meinong, Schumann, Stumpf, to melody as Gestaltqualität in von Ehrenfels.

13. CONCLUSIONS

We have no room here to go on in the analysis of this paper.

This essay presents many aspects that we will find later in the *Gestalpsychologie*.

However, the comparison between the two analyses, Myer's and Wertheimer's, shows an impressive modernity in the last, and an anchorage to an elementistic view for the first.

The essay indicates that the times were mature for the advent of the very Gestaltpsychologie.

And indeed, we had to wait only two years.

THANK YOU FOR YOUR
ATTENTION!