

# “LATENT” ABSOLUTE PITCH AND ITS IMPLICATIONS FOR THEORIES OF MUSICAL LONG-TERM MEMORY

*Kathrin Hahn*

*Elke van der Meer*

*Wolfgang Auhagen*

Humboldt University of Berlin, Germany

## Background

While absolute pitch (AP, the ability to name or produce tonal pitches without an external reference pitch) is often considered an ability that only few people possess, evidence for traces of this ability in the general population (“latent” AP) has been accumulated, showing memory for absolute pitches in tonal languages, in the production of pop and folk songs, as well as in the production and recognition of familiar classical music. The interpretation of these results leads to more general questions about the nature of musical long-term memory (LTM): Firstly, for musicians, the question arises, whether only symbolically coded pitches (pitch names) can be retained in LTM, or whether there exists also a form of long-term sensory memory for overlearned melodies, unrelated to the possession of AP? Secondly, for musicians and non-musicians (no pitch names available), the contribution of motor memory to the recall of familiar melodies needs to be addressed.

## Aims

The aim of this study was to differentiate between a “process” and a “trait” explanation for “latent” AP. A process explanation stresses the importance of familiarity and structure of the learned music, while a trait explanation focuses on individual musical experience and supposes a connection between “latent” and “manifest” AP.

## Method

A group of 94 secondary school pupils with varying degrees of musical experience learned a tonal and a modal melody for a short vs. long period of time. Memory for these two melodies was then tested with a recall and a recognition task and compared to the memory for a highly overlearned melody (advertising jingle) as well as with the ability to name pitches (AP test).

## Results & Conclusions

Results suggest a combination of the “process” and “trait” explanation: Memory for absolute pitches depends on familiarity and structure of the melody, while there is also an influence of musical background, although no correlations with “manifest” AP have been found.