The Perception of Melodic Closure

A study of the factors influencing
final note choice to achieve
melodic closure.

A thesis presented in partial fulfilment
of the requirements for the degree
of Master of Arts in
Applied Psychology at Massey University

Bryce Andrew Mills

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ABSTRACT

This study investigates the notion of closure put forward by gestalt theorists in reference to visual perception but applies it to aural perception of simple melodies. Specifically the study focusses on the final note chosen to effect melodic closure. It addresses the question of the selection of the final note and attempts to ascertain what major factors influence its selection.

To achieve this, three basic groups of subjects were tested; (1) children, - two groups of 20 males and 20 females, one group 10 years old and the other 12 years old (2) 20 male and 20 female young adults, 18 - 20 years, and (3) 10 performing musicians with an expressed preference for traditional western classical music and 10 performing musicians with an expressed preference for jazz and non-conventional music. From the first two groups a random sample of 5 males and 5 females was extracted for alternative treatment and the application of the Witkin Embedded Figures test.

The first two groups were presented with a recording of four simple melodies each played seven times providing a different final note. Twenty-eight items were therefore provided and subjects were required to indicate whether or not they felt satisfied with the melody as a completed entity.

The group of trained musicians were given in conventional notation the first 1¼ bars of a simple melody and asked to complete it exercising their own choice as to contour and the instrument used.

The random sample extracted from groups 1 and 2 were taught a simple unfinished melody on a metalophone and asked to provide two notes to complete it. They were also tested on the Witkin Embedded Figures Test to ascertain whether cognitive style was a relevant factor or not.

The results presented show that subjects do have clear preferences for melodic closure. The tonic of the perceived key is significantly chosen to effect closure but the degree of preference is tune specific and influenced by melodic contour.

The research also shows that closure choices are mediated by age, sex, and cognitive style, and the interaction of these factors.

Design A provides clear evidence of mediation of closure by melodic contour while Design B demonstrates that the interaction of sex and cognitive style is a significant factor influencing melodic closure.

A degree of conflict between results obtained in Design A and Design B suggests that the major factors influencing closure are tune specific.

Design C demonstrates that there is a difference in the way musicians of different "styles" affect melodic closure. However the difference was the reverse of that expected - "Jazz" musicians showed greater preference for tonic closure than did "Traditional" musicians.

This research demonstrates that people do have a definite preference to effect melodic closure with the tonic of the perceived key but this preference is not uniformly applied.

It is affected by tune specific factors, as well as the subject factors of age, sex, cognitive style, and the interaction of all four factors.

CHAPTER I

INTRODUCTION

This research arose out of the intergration of two different aspects of research in music. The first involved work on the dichotic processing of melodies put forward by Kallman & Corballis (1975) in which it was noted that unsophisticated musical listeners processed their music holistically in the right hemisphere, while sophisticated listeners processed their music analytically which is a left hemisphere mode. The second research emphasis that influenced this work was based on the notion of Gestalt psychologists and theorists who posit that people seek to complete their perception of visual stimuli (and possibly aural stimuli) in such a manner that it is simple unitary, and closed. The final factor influencing the present research was the personal observation during musical performances that a great majority of a musical audience seem unable to tolerate chordal accompaniments that do not resolve to the tonic. In one instance this was very evident when a song was left unresolved on a D sus 4 chord. The audience was "restless" but when resolution to D major was provided some 10 - 15 seconds later, the audience returned to their previous "settled" condition.

As a result of the interaction of these three inputs, the question was asked - What is the basis of this "restlessness" and what ending is necessary for people to feel satisfied with the melody? That resolution to the tonic was not the only possible conclusion was

suspected because numerous jazz musicians do not resolve their music to the tonic, either melodically or chordally. It appeared that the "musical rule" regarding resolution to the tonic did not necessarily satisfy all listeners, indeed some sought resolution to some other note.

Considerable work has been presented addressing the visual aspects of Gestalt theory (e.g. Kohler 1969) but there appears to be far less addressing the aural aspects. It was reasoned that if perception did follow Gestalt theory (Vurpillot 1976) then this should also be evident in aural perception, not just visual perception. To this extent then this present research does, to a degree, test Gestalt theory.

To achieve the aims of the research it was deemed necessary to work with three basic groups of subjects; children, young adults, and performing musicians. To study whether or not there is a developmental aspect involved the identity of each group was preserved, as was the expressed musical preferences of the performing musicians.

In terms of the above then, the experiment investigated the melodic perception of a sample of people covering a wide range of age, and musical experience, and attempted to discover whether people did effect melodic closure with a Gestalt type factor, and if so what this factor was, and what influenced its selection.