

5.9 FIGURE-GROUND PROBLEM FOR SOUND

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The impossible tuning fork is a good example of a figure-ground optical illusion. Tracing the body of the tuning fork leads to the background. What is figure and what is ground?

Another famous example is the face-vase illusion. Two mirror image blue faces lie against a red background. If one stares at the picture for awhile, one sees a red vase against a blue background. Attention flickers from one foreground - background pair to its complement.

Can we create the same sort of illusion for sound? Consider a rich tone against a background of silence. This tone goes off and on in such a manner that it is perceived by the ear-brain as a rhythm, dah di da da, dah, dah Is it possible that the silence that lies between these bursts of sound also qualifies as a rhythm? Not the same rhythm, but one of equally compelling artistic merit? If so, we wish to give this background silence equal status by providing another rich tone for the silence. The whole waveform then is of roughly constant power. The "blue" tone predominates until, for some arbitrary reason, the ear-brain focuses on the "red" tone. One of two interesting rhythms is perceived against a "constant" background. This would constitute an aural figure-ground illusion.

It remains to discover a rhythm the complement of which is also a rhythm and to choose the sounds appropriately.