

Vortices and how they contribute to the sound of fricatives

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The sources of sound in speech, whether generated at the glottis or downstream in the vocal tract, are aero-acoustic in nature. Energy of airflow, especially vortex flow, is converted to sound in these sources. A thorough understanding of the acoustic differences between different sounds that is due to the nature of the source depends on knowledge of how vortex flows emit sound. This tutorial will introduce, from scratch, the Howe-McGowan approach to understanding vortex sound and will give examples of phonetic distinctions of voice type and sibilance as illustrations of the theory.