

Term	Definition
<b><i>Impulse</i></b>	A recorded impact sound that was extracted from a recording of a rubber ball bouncing naturally on a wooden surface. Each impact sound produced one impulse.
<b><i>Bounce sequence</i></b>	A sequence of <b><i>impulses</i></b> that were placed temporally according to a set of parameters (i.e., Tau, number of impulses, and $III_o$ ).
<b><i>Starting Sequence (SS)</i></b>	An optimized <b><i>bounce sequence</i></b> that was used for the Delay-add synthesis procedure to create rolling events. There were two: <b><i>SS_200</i></b> and <b><i>SS_400</i></b> .
<b><i>SS_200</i></b>	An optimized <b><i>bounce sequence</i></b> that was used to create a continuum of sounds from bouncing to rolling. It contained 8 <b><i>impulses</i></b> , a Tau of 5 and an $III_o$ of 200 ms.
<b><i>SS_400</i></b>	An optimized <b><i>bounce sequence</i></b> that was used to create a continuum of sounds from bouncing to rolling. It contained 8 <b><i>impulses</i></b> , a Tau of 5 and an $III_o$ of 400 ms.
<b><i>Impulse sequence</i></b>	A sequence of <b><i>impulses</i></b> resulting from the Delay-add synthesis procedure, which added a <b><i>bounce sequence</i></b> to itself with jittered delays.
<b><i>C_200</i></b>	A continuum of 36 <b><i>impulse sequences</i></b> that were synthesized from <b><i>SS_200</i></b> using the Delay-add synthesis procedure.
<b><i>C_400</i></b>	A continuum of 36 <b><i>impulse sequences</i></b> that were synthesized from <b><i>SS_400</i></b> using the Delay-add synthesis procedure.
<b><i>Temporal irregularity</i></b>	The randomness in the time between <b><i>impulses</i></b> in the <b><i>impulse sequence</i></b> . A feature that was analyzed to understand its perceptual nature.
<b><i>Density</i></b>	The number of <b><i>impulses</i></b> that occur per second time in the <b><i>impulse sequence</i></b> . A feature that was analyzed to understand its perceptual nature.

Table S1. Definitions of terminology used throughout the article for readers to reference.