Supplementary Information

Title:

Ultrashort-range, high-frequency communication by female mice shapes social interactions.

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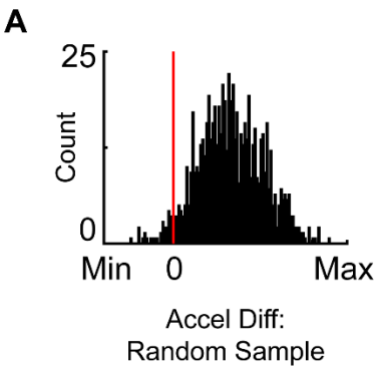
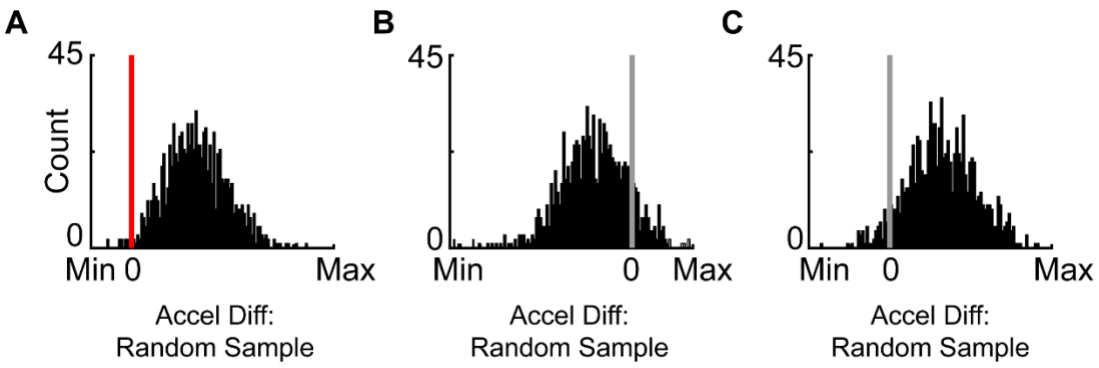
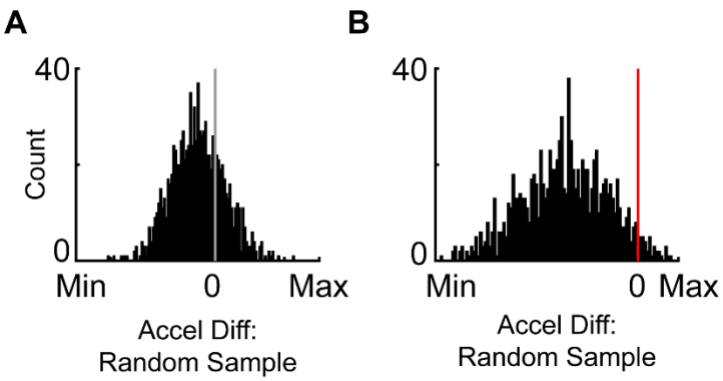


Supplementary Figure 1. Controlling for significance of behavioral response to temporally isolated signals. Corresponding to the data in **Figure 4B**; Bootstrap resampling revealed robust changes in a male's acceleration when the female vocalizer was moving faster. A thousand unique subsamples were generated, with the number of data points per sample equaling 25 percent of the total examples. The acceleration difference between vocal and non-vocal trajectories (vocal minus non-vocal) was calculated for each subsample (black bars show distribution), and the overall distribution of differences was compared to zero (vertical line). Gray line = $p>0.05$; red line = $p<0.05$.



Supplementary Figure 2. Controlling for significance of behavioral response to all vocal signals. A-C, Bootstrap resampling revealed that the significant changes in a receiver's acceleration when the vocalizer was moving faster (**Figure 5C**) persisted regardless of the sample size. In contrast, the significant changes in a receiver's acceleration when the vocalizer was moving slower (**Figure 5D,F**) disappeared when accounting for sample size. A thousand unique subsamples were generated, with the number of data points per sample matching the number of temporally-isolated signals emitted in the same condition. The acceleration difference between vocal and non-vocal trajectories (vocal minus non-vocal) was calculated for each subsample (black bars show distribution), and the overall distribution of differences was compared to zero (vertical line). Gray line = $p>0.05$; red line = $p<0.05$. FF = same sex; MF = opposite sex; F Voc = female vocalizer, M Voc = male vocalizer; F Rec = female receiver, M Rec = male receiver.



Supplementary Figure 3. Controlling for significance of behavioral response over time. Corresponding to the data in **Figure 6A,C**; Bootstrap resampling revealed no significant changes in a female's acceleration during the last ten minutes (epoch 3) after her female social partner vocalized while traveling faster. However, males showed a robust behavioral response to female-emitted signals during the first ten minutes (epoch 1) while the female traveled faster. A thousand unique subsamples were generated, with the number of data points per sample equaling 25 percent of the total examples. The acceleration difference between vocal and non-vocal trajectories (vocal minus non-vocal) was calculated for each subsample (black bars show distribution), and the overall distribution of differences was compared to zero (vertical line). Gray line = $p>0.05$; red line = $p<0.05$.