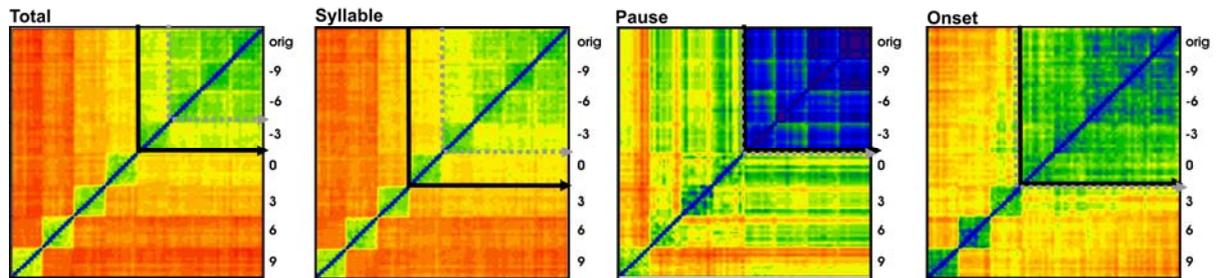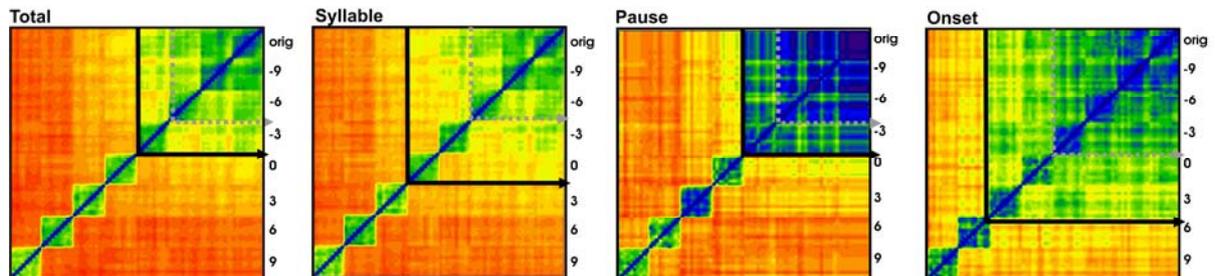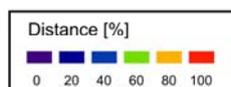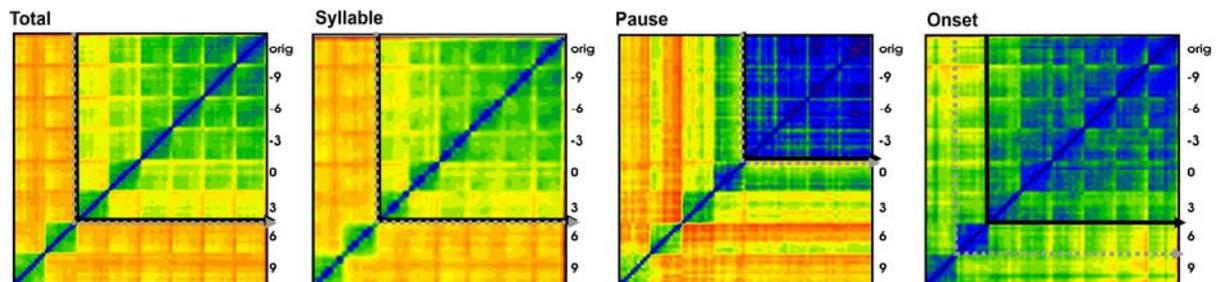**Online Resource 6** Distance matrices of a receptor cell (upper row) and two local interneurones SN1 and TN1 (middle and lower row). For each cell, the matrices of the total response, the syllable response, the pause response and the Onset response are shown. Distances are color coded from blue to red (zero to maximum distance). The nCDLs for each cell, as determined by the discrimination analysis (grey, dashed line) and the information-based clustering algorithm (black, solid line) (see Fig.5), are indicated.

author names: Daniela Neuhofer, Martin Stemmler, Bernhard Ronacher
affiliation and e-mail address of the corresponding author:
Department of Biology
Humboldt-Universität zu Berlin
Invalidenstrasse 43
10115 Berlin
Germany
neuhofda@cms.hu-berlin.de