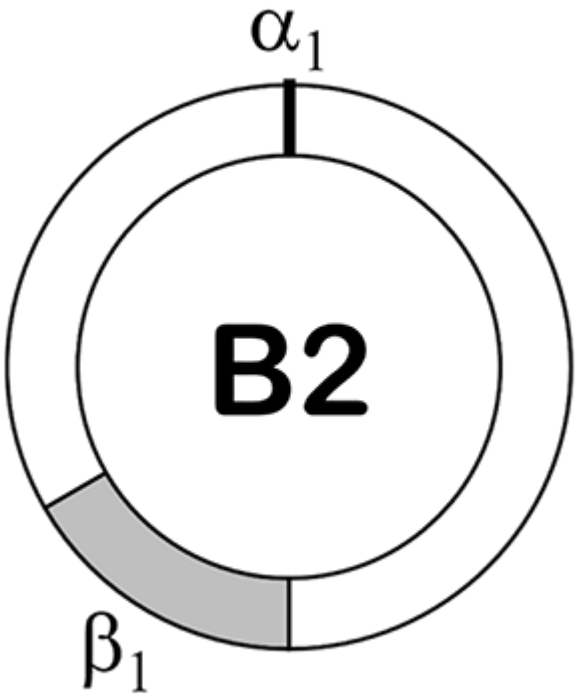
A JOURNAL OF THE SOCIETY FOR MUSIC THEORY

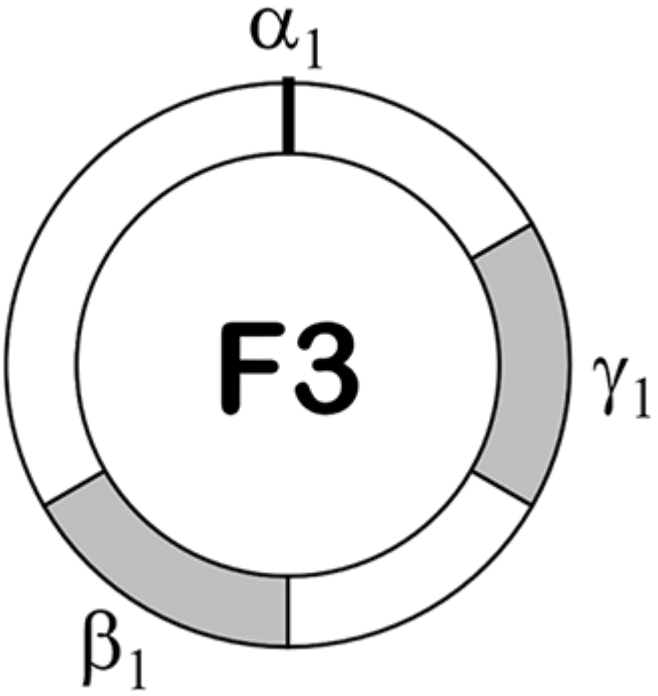
MTO 29.3 Examples: Morford and David, Metric Modes and Fluid Meter in Mande Drumming Music

(Note: audio, video, and other interactive examples are only available online)
https://mtosmt.org/issues/mto.23.29.3/mto.23.29.3.morforddavid.html

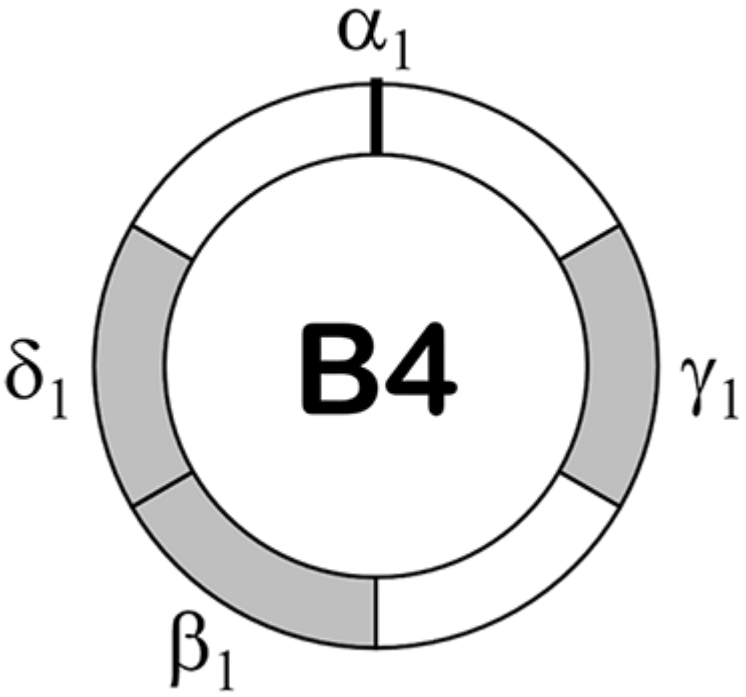
Example 1. Back-Heavy Two Pulsation Cycle. Time flows clockwise. The black bar at the top represents the placement of α_1, which occurs at a precise moment. The shaded area represents the range for β_1.



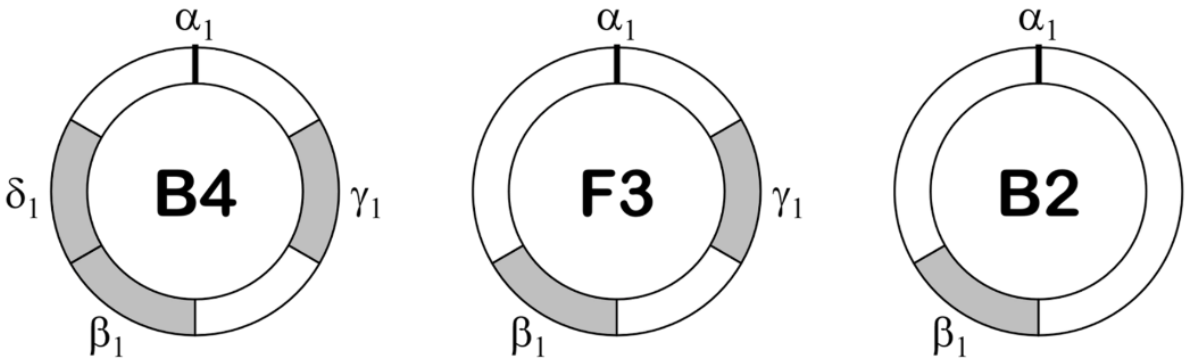
Example 2. Front-Heavy Three Pulsation Cycle. Time flows clockwise.



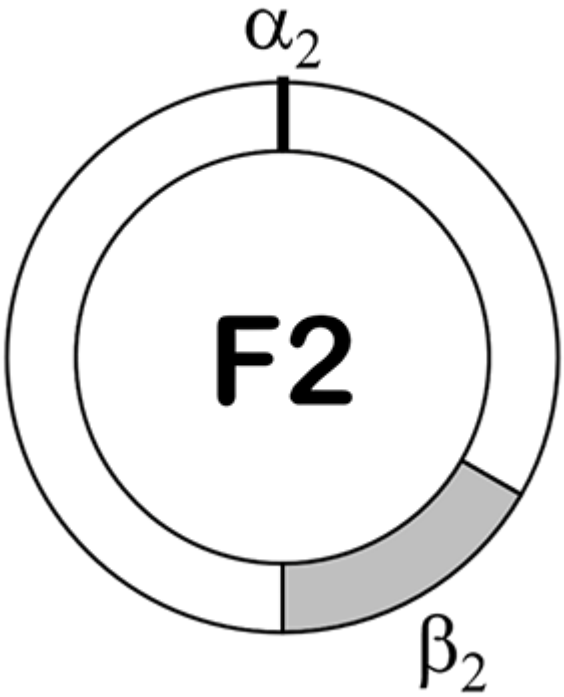
Example 3. Back-Heavy Four Pulsation Cycle. Time flows clockwise.



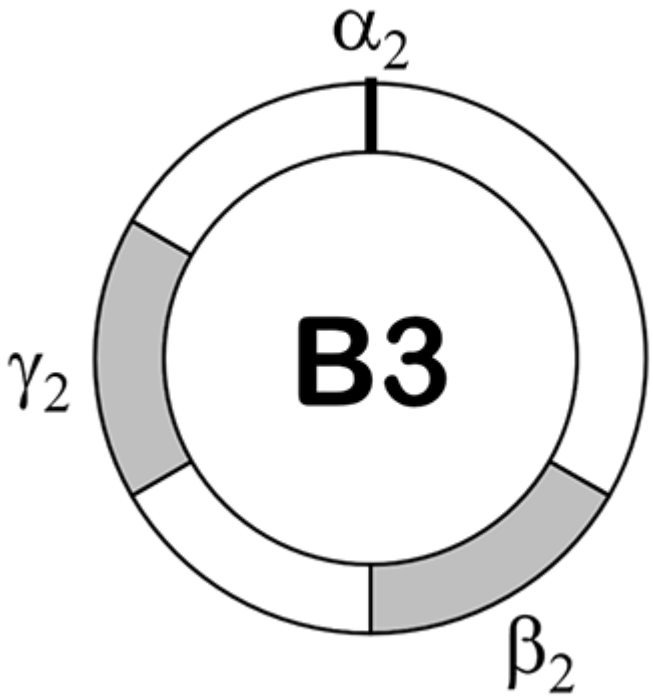
Example 4. Mode 1 Pulsation Cycles in order of decreasing pulsation quantity from left to right



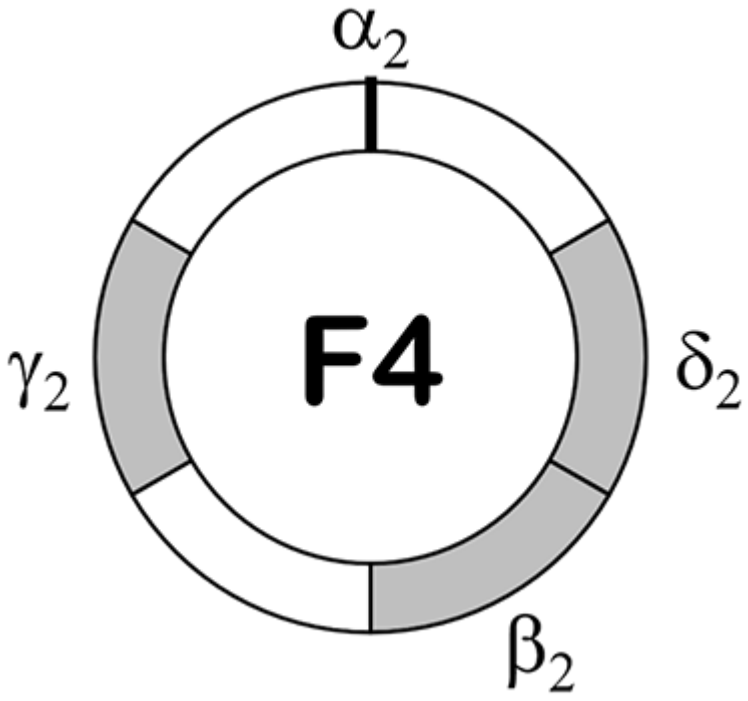
Example 5. Front-Heavy Two Pulsation Cycle. Time flows clockwise.



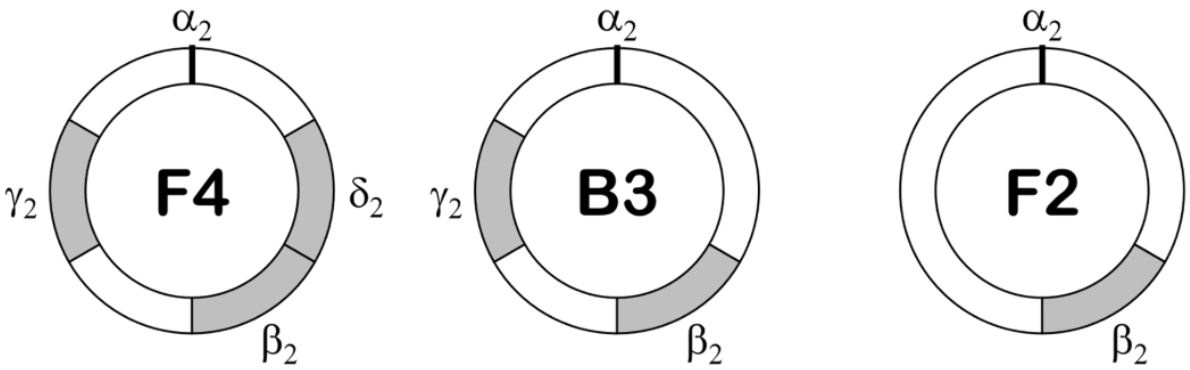
Example 6. Back-Heavy Three Pulsation Cycle. Time flows clockwise.



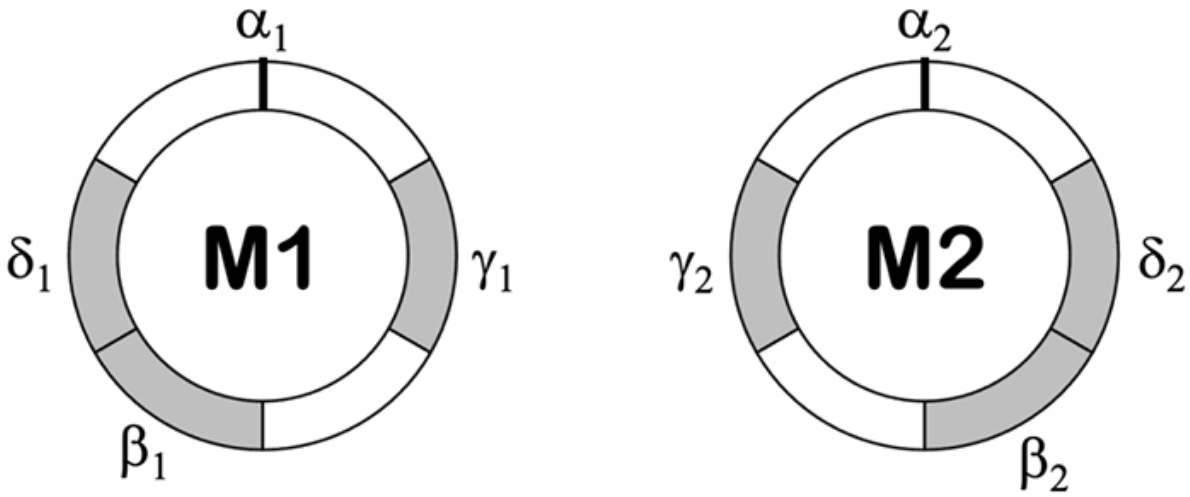
Example 7. Front-Heavy Four Pulsation Cycle. Time flows clockwise.



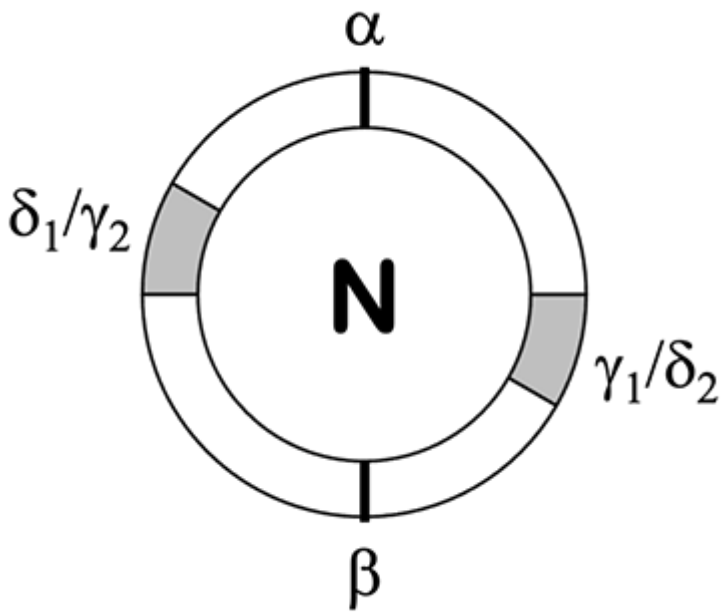
Example 8. Mode 2 Pulsation Cycles in order of decreasing pulsation quantity from left to right



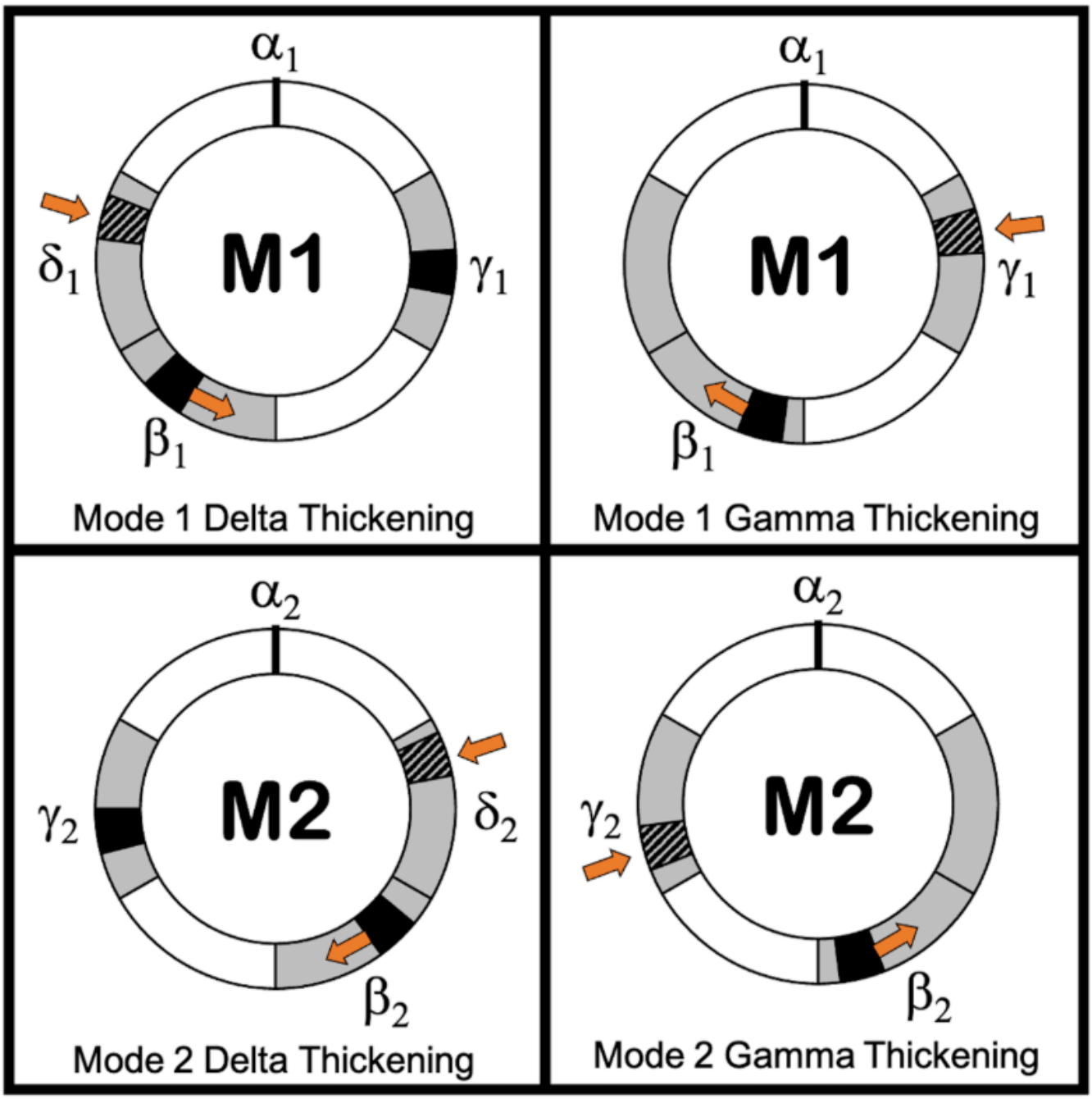
Example 9. Mode 1 and Mode 2 pulsation cycles. Note the mutually exclusive gaps falling between ⅓ and ½ of a cycle in Mode 1 and between ½ and ⅔ of a cycle in Mode 2.



Example 10. Neutral Pulsation Cycle. Time flows clockwise.



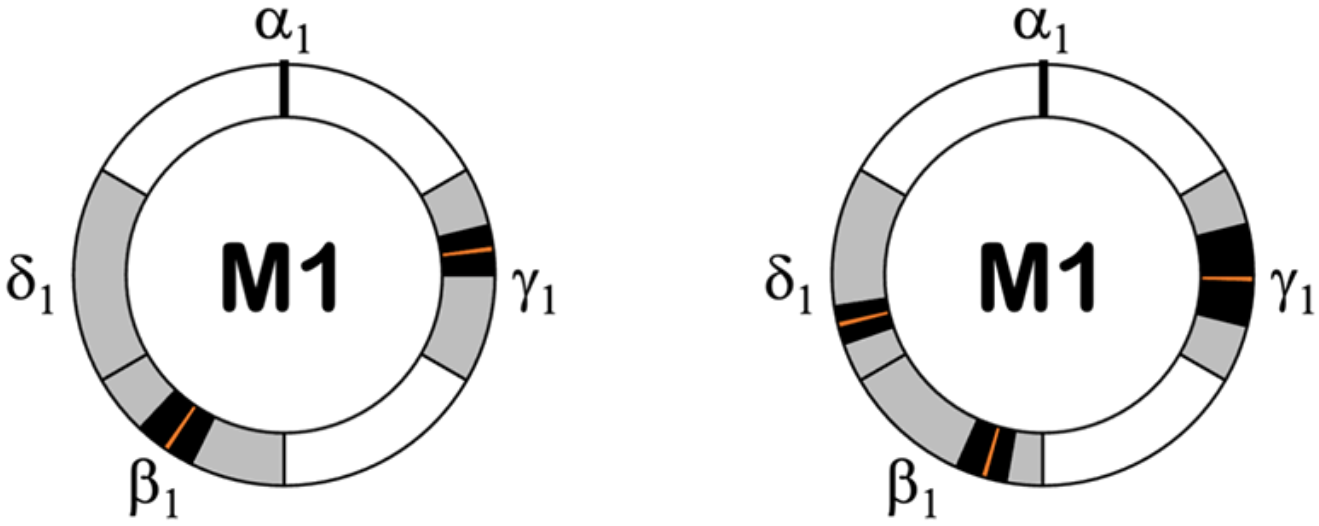
Example 11. Delta and Gamma Thickening in Mode 1 and Mode 2, with hypothetical ranges given in black. Pulsations introduced during thickening are shown with a striped fill, and the direction of β movement is indicated.



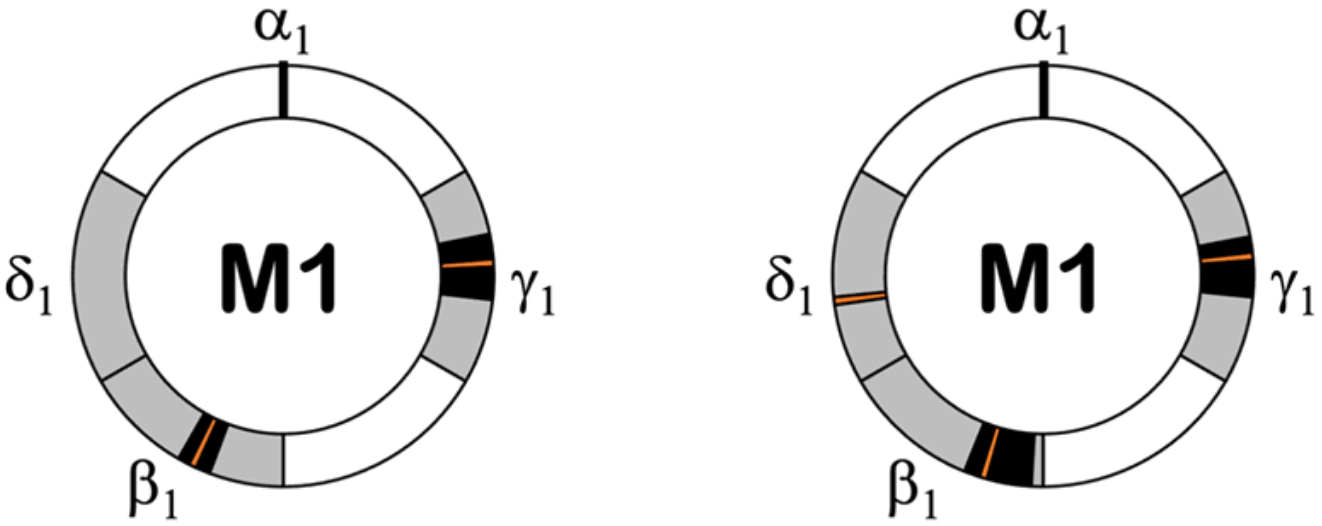
Example 12. Hand-over-hand patterns in Mode 1 and Mode 2 (two cycles of each)

Pulsations	Binary Handing	Ternary Handing	Quaternary Handing
$\alpha_1\ \beta_1,\ \alpha_1\ \beta_1$ $\alpha_2\ \beta_2,\ \alpha_2\ \beta_2$	M1: RL, RL M2: RL, RL	M1: R_R, L_L M2: RL_, LR_	M1: R_R_, R_R_ M2: R_R_, R_R_
$\alpha_1\ \gamma_1\ \beta_1,\ \alpha_1\ \gamma_1\ \beta_1$ $\alpha_2\ \beta_2\ \gamma_2,\ \alpha_2\ \beta_2\ \gamma_2$		M1: RLR, LRL M2: RLR, LRL	M1: RLR_, RLR_ M2: R_RL, R_RL
$\alpha_1\ \gamma_1\ \beta_1\ \delta_1,\ \alpha_1\ \gamma_1\ \beta_1\ \delta_1$ $\alpha_2\ \delta_2\ \beta_2\ \gamma_2,\ \alpha_2\ \delta_2\ \beta_2\ \gamma_2$			M1: RLRL, RLRL M2: RLRL, RLRL

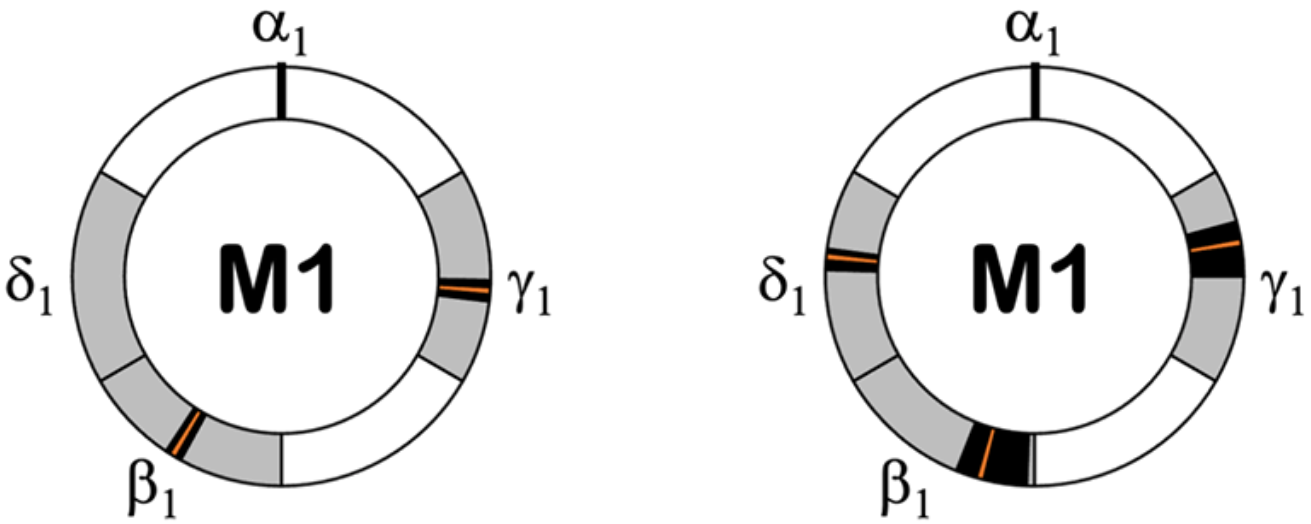
Example 13. Timing profiles for the first delta thickening passage in "Woloso 1". The range for minimum and maximum values of sounded notes is given in black, and the mean values are given in orange. In the unthickened passage (left), γ_1 has a minimum value (min) of 21.2%, a maximum value (max) of 25.0%, and a mean value (mean) of 23.0%. In the thickened passage (right), γ_1 has a min of 21.1%, a max of 28.9%, and a mean of 25.3%. In the unthickened passage, β_1 has a min of 57.3%, a max of 62.0%, and a mean of 59.5%. In the thickened passage, β_1 has a min of 52.8%, a max of 56.7%, and a mean of 54.5%. The thickened δ_1 has a min of 69.7%, a max of 72.6%, and a mean of 71.2%.



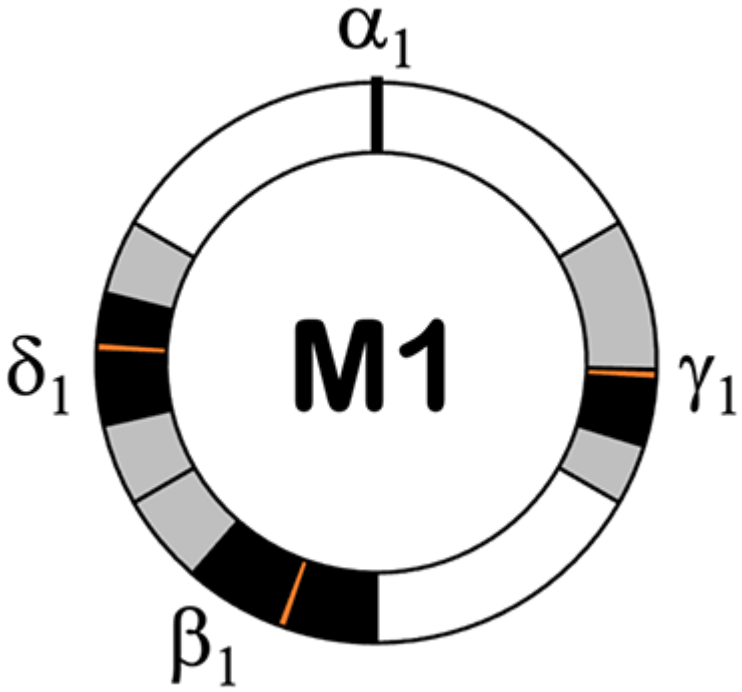
Example 14. Timing profiles for the second delta thickening passage in "Woloso 1". The range for minimum and maximum values of sounded notes is given in black, and the mean values are given in orange. In the unthickened passage (left), γ_1 has a min of 21.8%, a max of 26.8%, and a mean of 24.0%. In the thickened passage (right), γ_1 has a min of 22.0%, a max of 26.6%, and a mean of 23.5%. In the unthickened passage, β_1 has a min of 55.7%, a max of 58.3%, and a mean of 57.1%. In the thickened passage, β_1 has a min of 50.9%, a max of 56.1%, and a mean of 54.6%. The thickened δ_1 has a min of 72.9%, a max of 73.4%, and a mean of 73.1%.



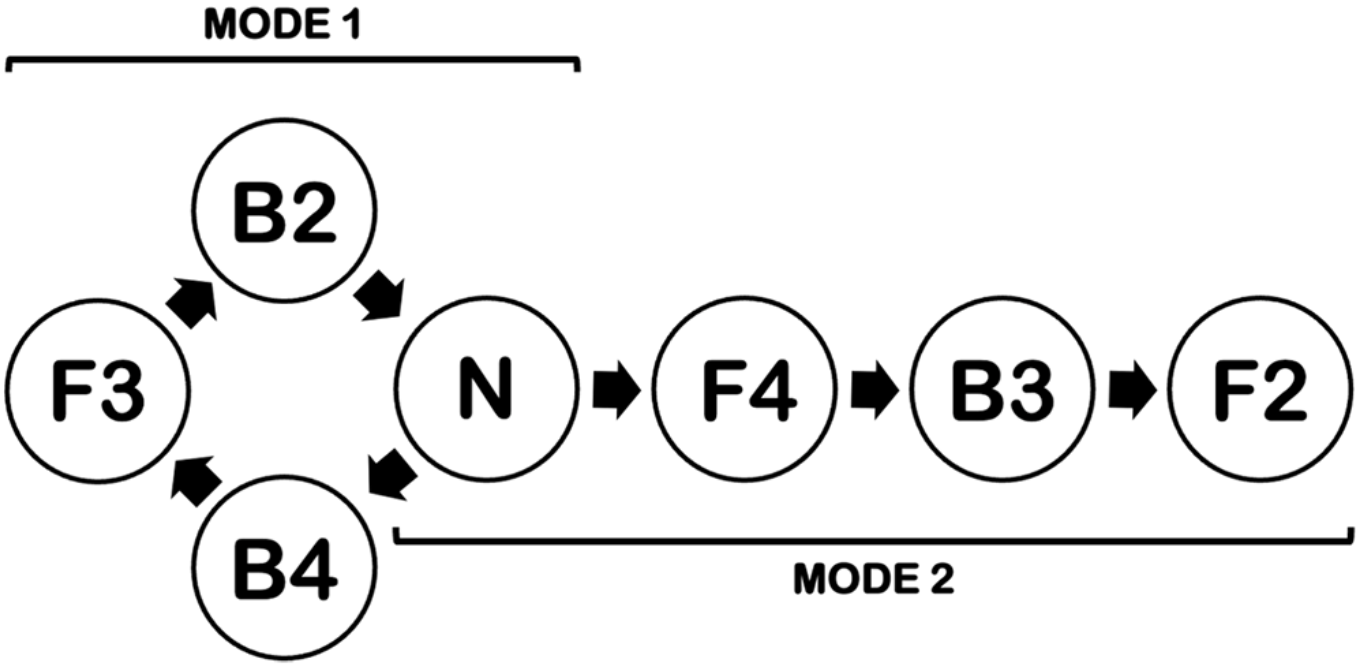
Example 15. Timing profiles for the first delta thickening passage in "Woloso 2". The range for minimum and maximum values of sounded notes is given in black, and the mean values are given in orange. In the unthickened passage (left), γ_1 has a min of 25.3%, a max of 26.9%, and a mean of 26.1%. In the thickened passage (right), γ_1 has a min of 20.8%, a max of 25.0%, and a mean of 22.4%. In the unthickened passage, β_1 has a min of 58.0%, a max of 59.3%, and a mean of 58.7%. In the thickened passage, β_1 has a min of 50.6%, a max of 56.1%, and a mean of 54.2%. The thickened δ_1 has a min of 75.5%, a max of 77.1%, and a mean of 76.5%.



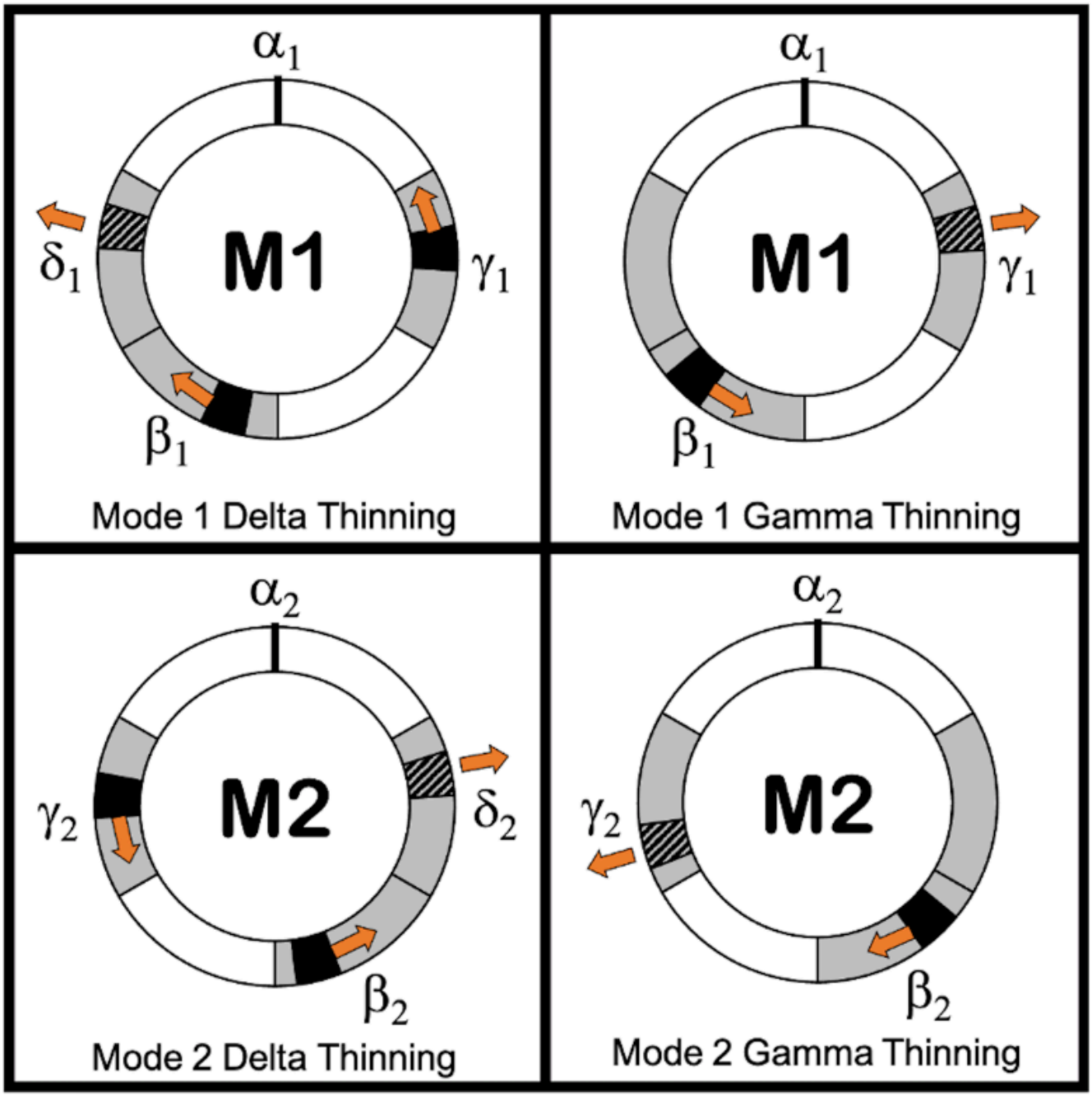
Example 16. Timing profile for extended second thickening passage in "Woloso 2". The range for minimum and maximum values of sounded notes is given in black, and the mean values are given in orange. Pulsation γ_1 has a min of 25.7%, a max of 29.8%, and a mean of 25.7%. Pulsation β_1 has a min of 50.1%, a max of 61.4%, and a mean of 55.5%. Pulsation δ_1 has a min of 71.4%, a max of 79.0%, and a mean of 75.9%.



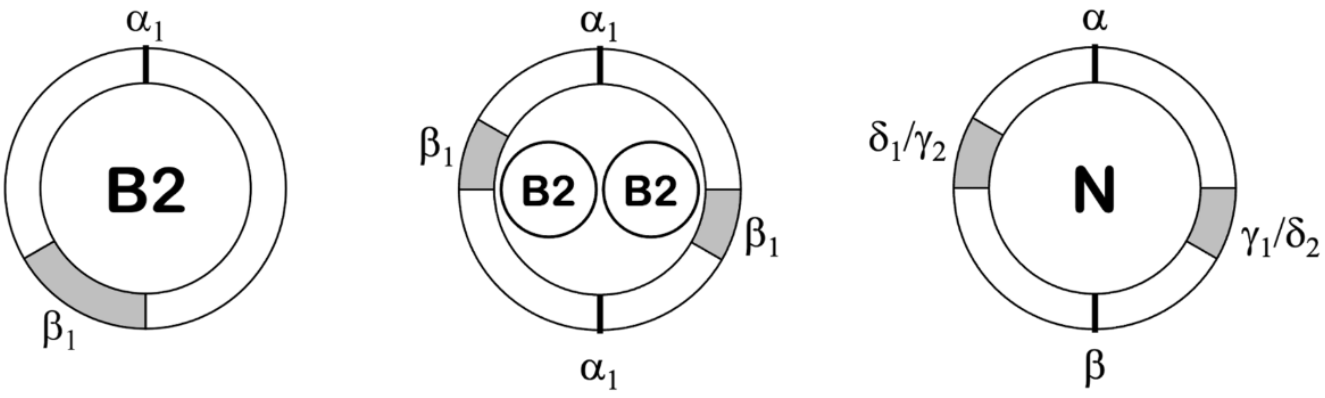
Example 17. Full Maturation Sequence. Arrows represent the direction of the potential transformation between pulsation cycles and modes, which can occur over brief or extended durations of time.



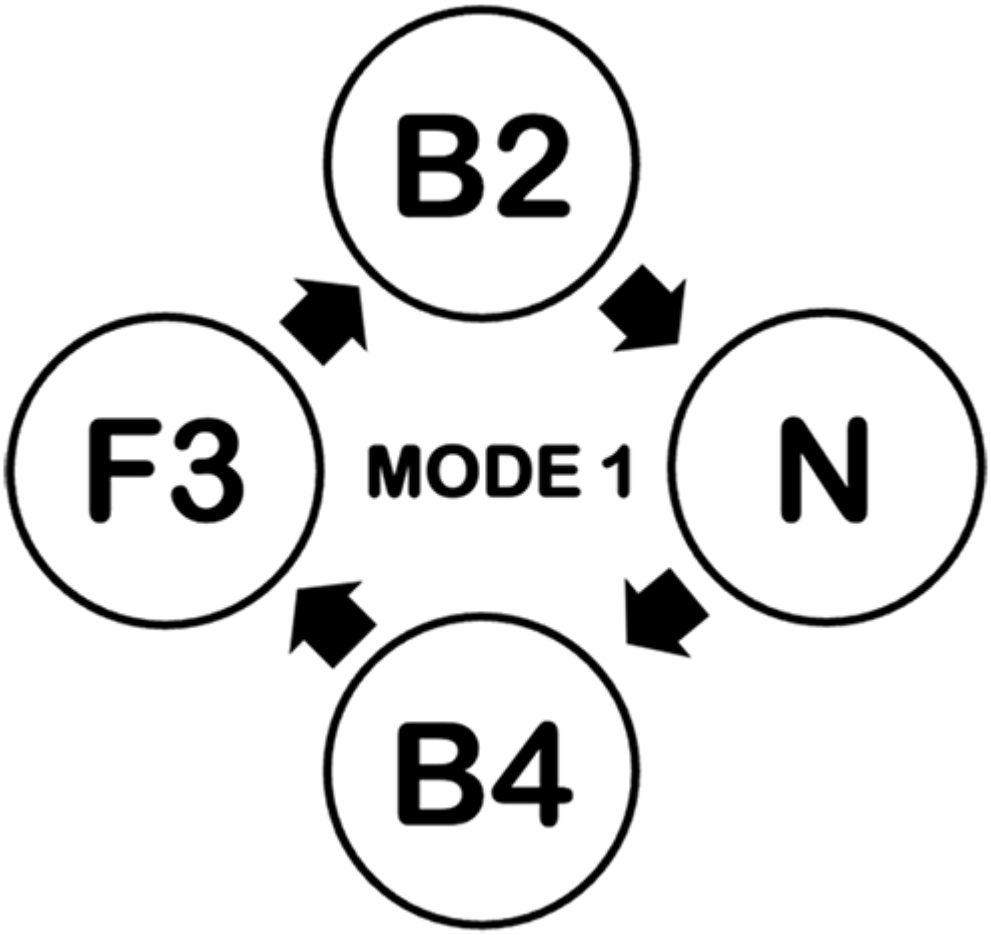
Example 18. Delta and Gamma Thinning in Mode 1 and Mode 2 with hypothetical ranges given for pulsations. Textured slices represent omitted pulsations.



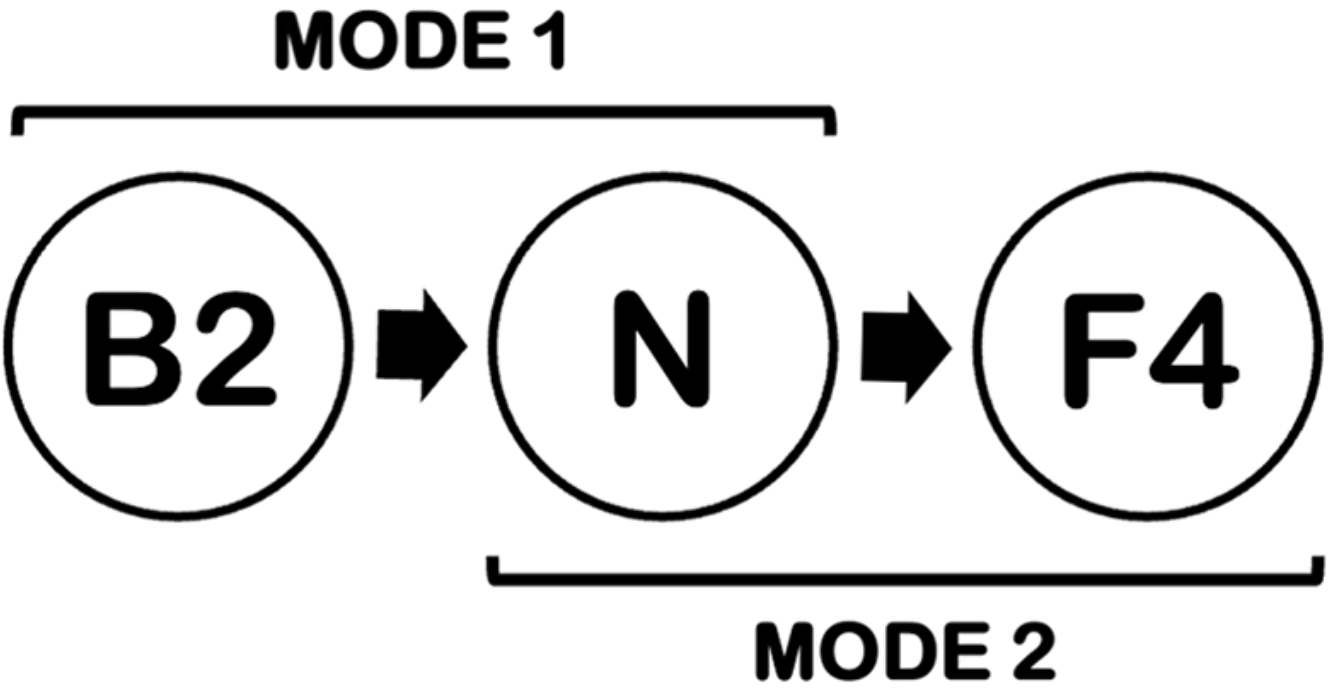
Example 19. Transformation from Back-Heavy Two into Neutral through pulsation downgrading (left to right). The identity of a downgraded β (as γ or δ) depends on the mode into which the performance matures.



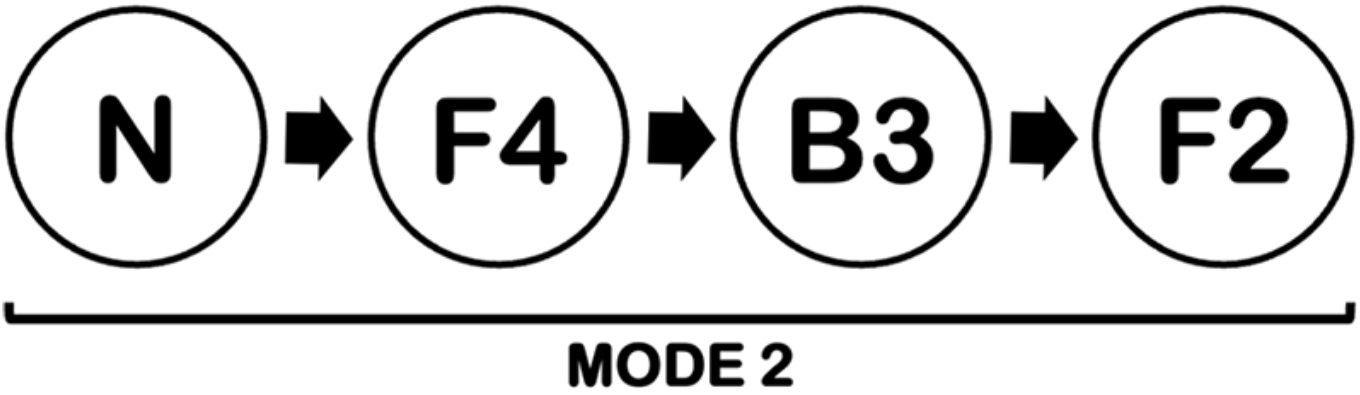
Example 20. Mode 1 Maturation Sequence. Each circle represents a pulsation cycle.



Example 21. Maturation from Mode 1 into Mode 2. Back-Heavy Two becomes Neutral through pulsation downgrading. Neutral becomes Front-Heavy Four through pulsation position change.



Example 22. Mode 2 Maturation Sequence



Example 23. Annotated reproduction of the impact of non-isochrony on consonance during hypothetical metric layer reduction of a "Sunun" dundun part from "Figure 3" of Polak (2020). Here, the original figure is supplemented by identifying sounded notes according to their pulsation identity (labels given in green). Examples of notes that are categorically altered through the process of maturation, these notes would be omitted altogether in the associated pulsation cycles transformed from quaternary to binary within Mode 2, as indicated.