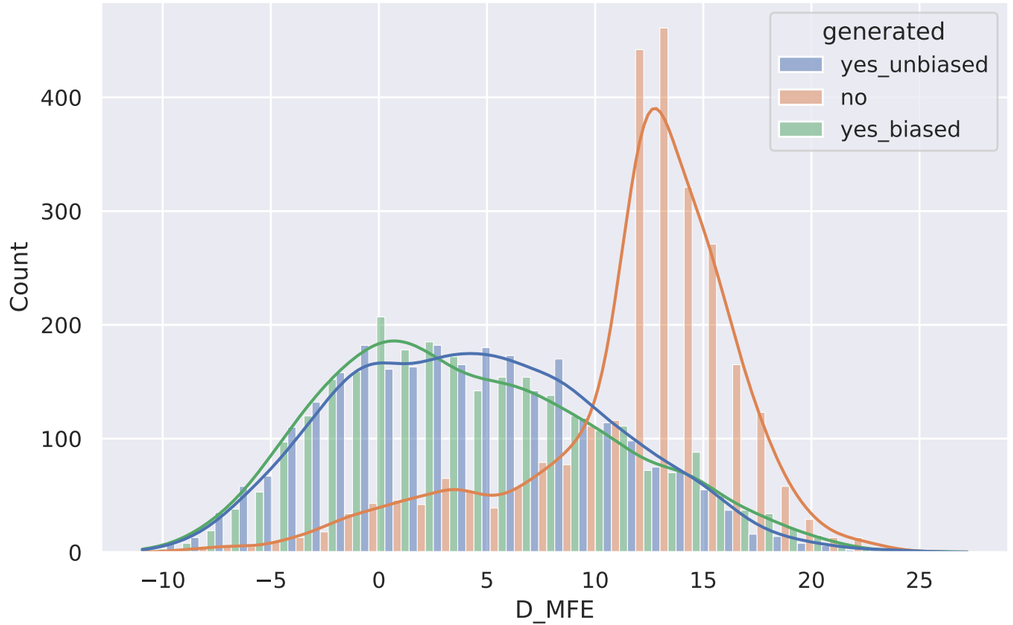
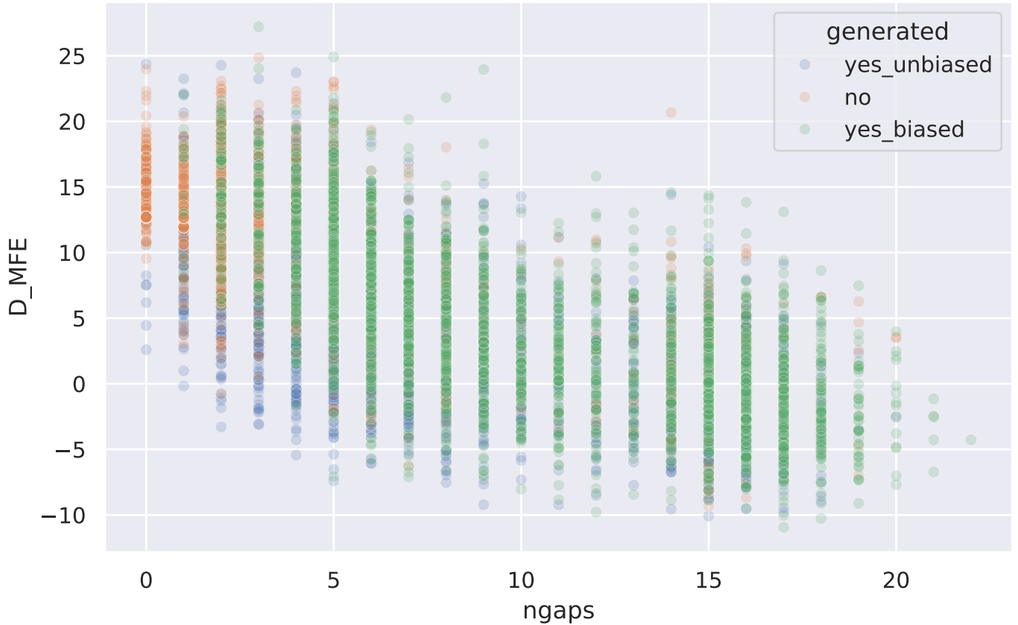
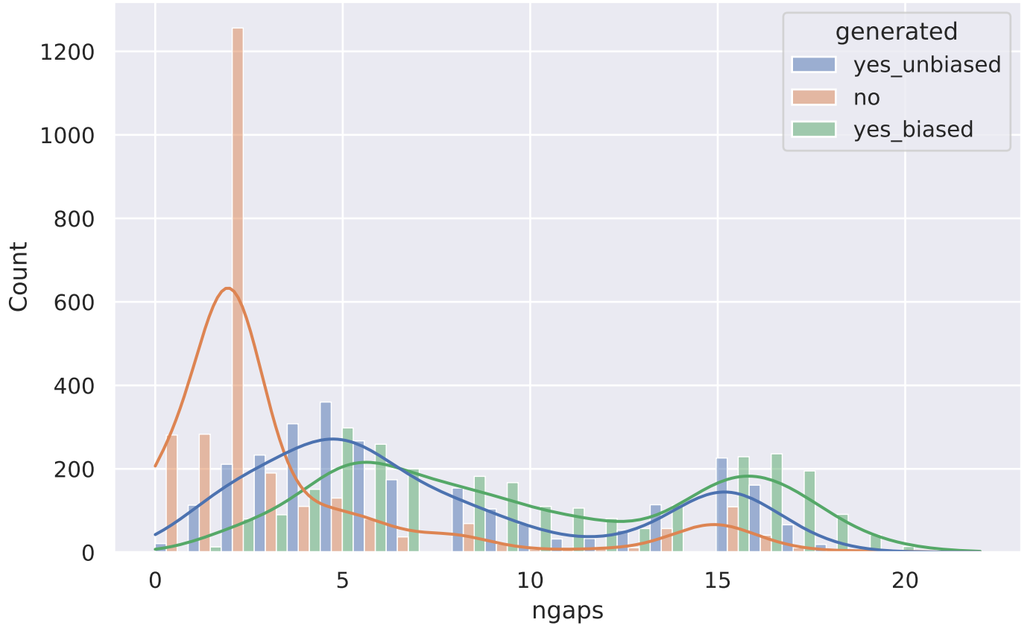
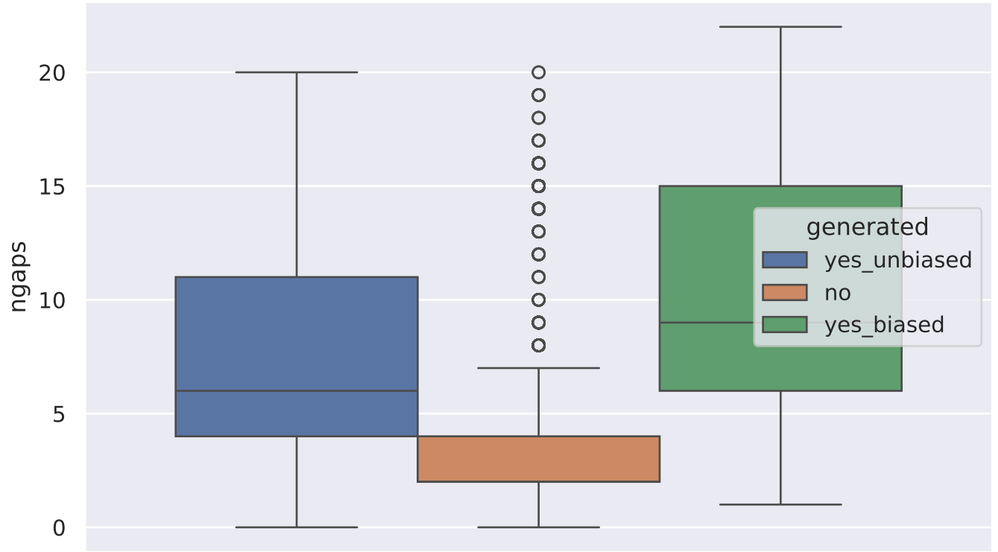
Numeric Feature : D_MFE



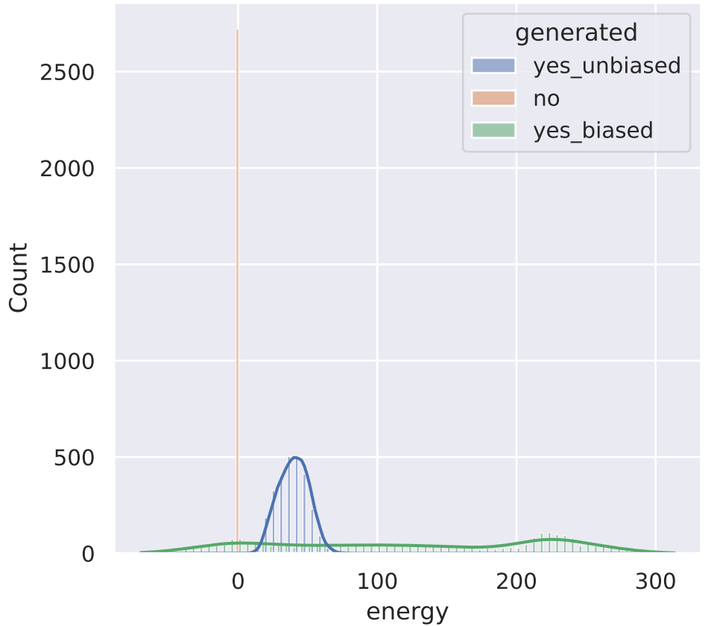


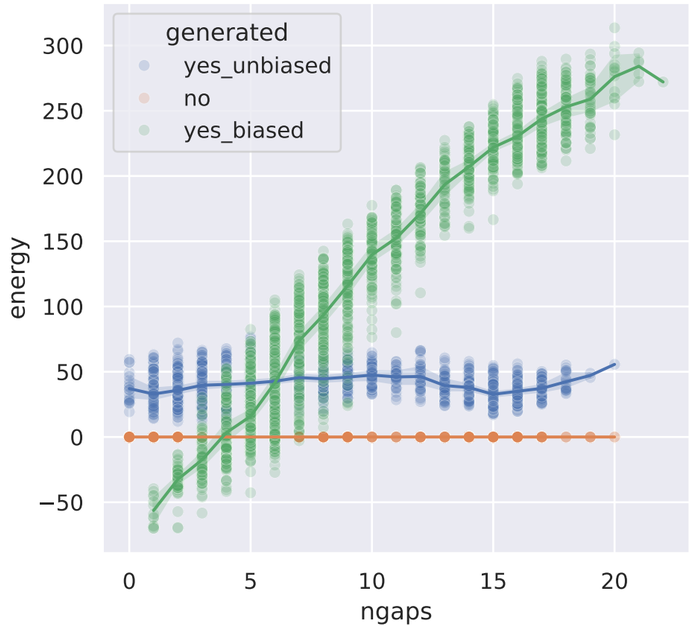
Numeric Feature : ngaps

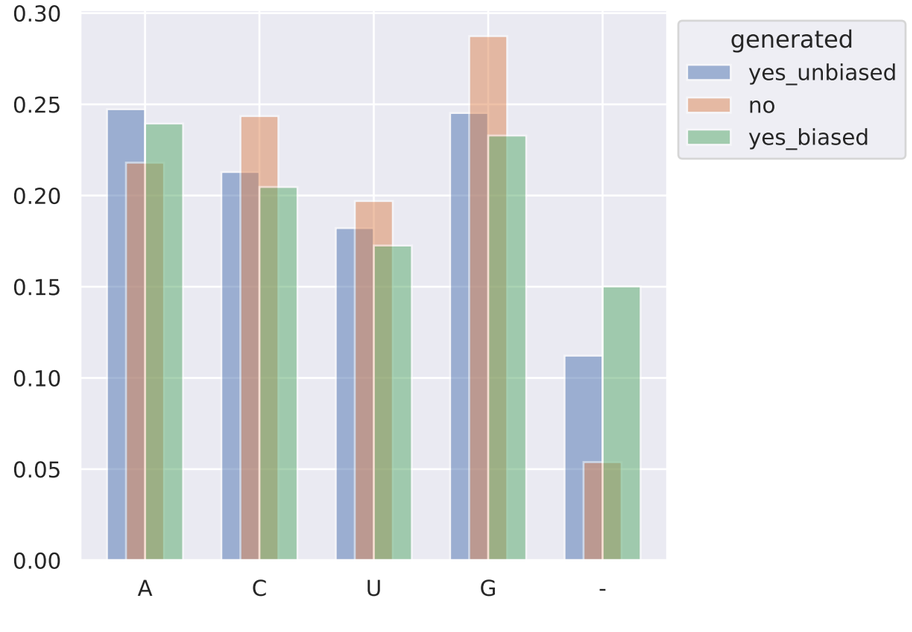


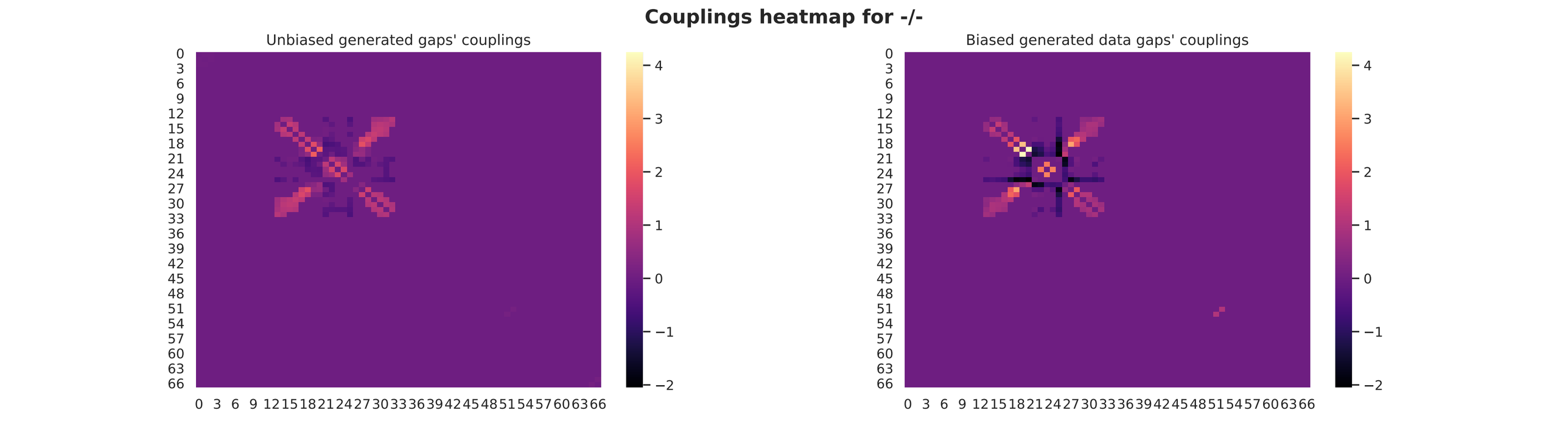


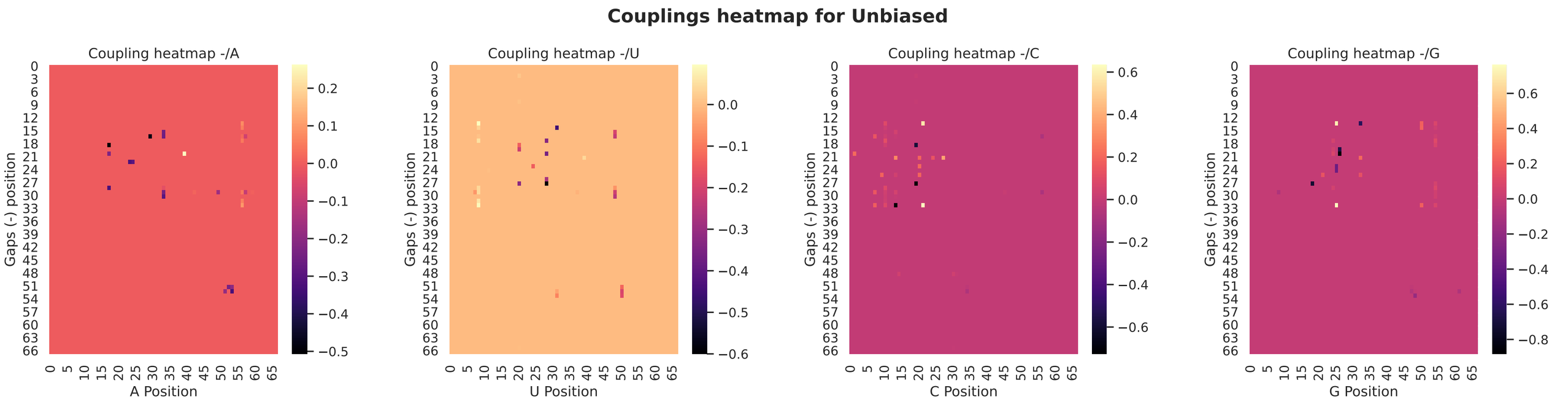
Numeric Feature : Sequences Energy and Nucleic acid average frequency

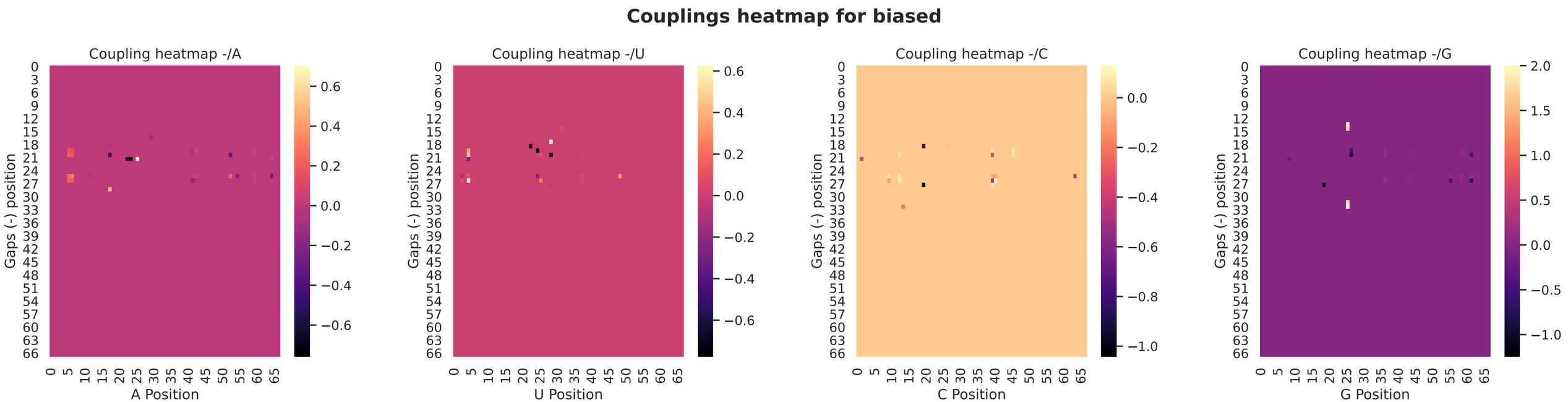


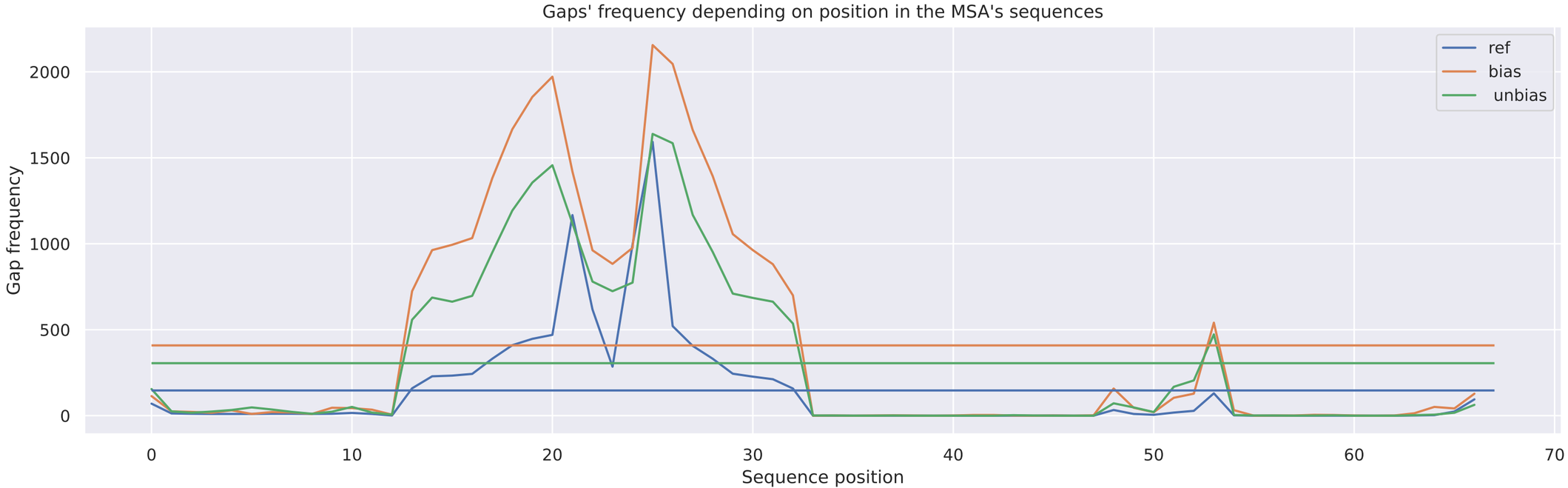


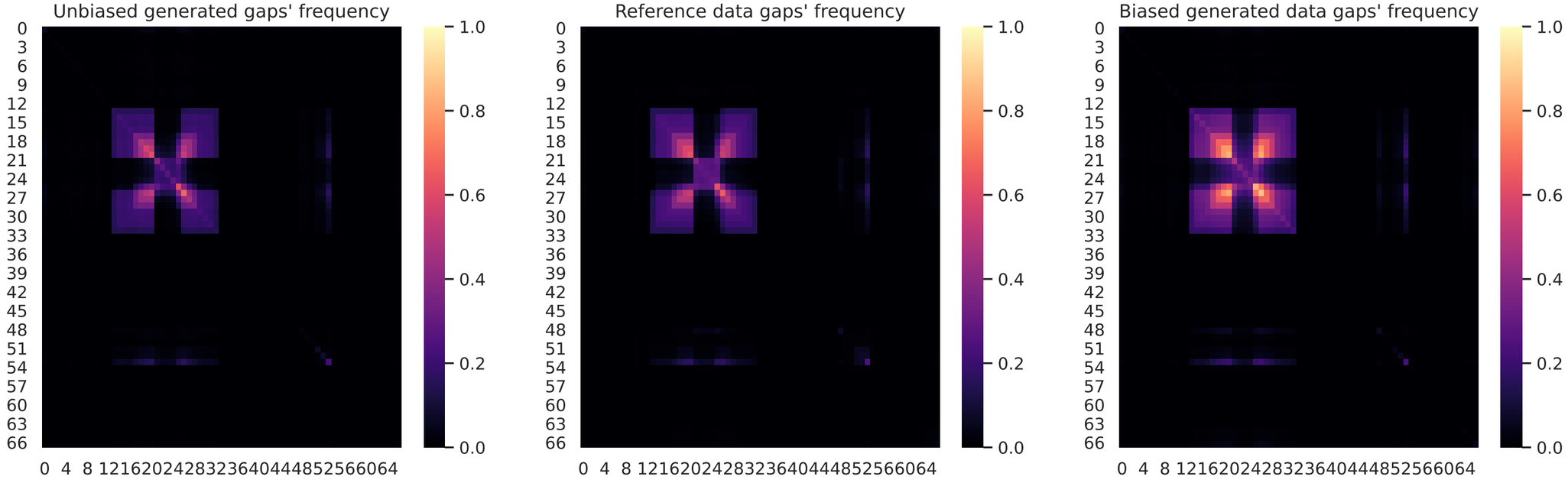


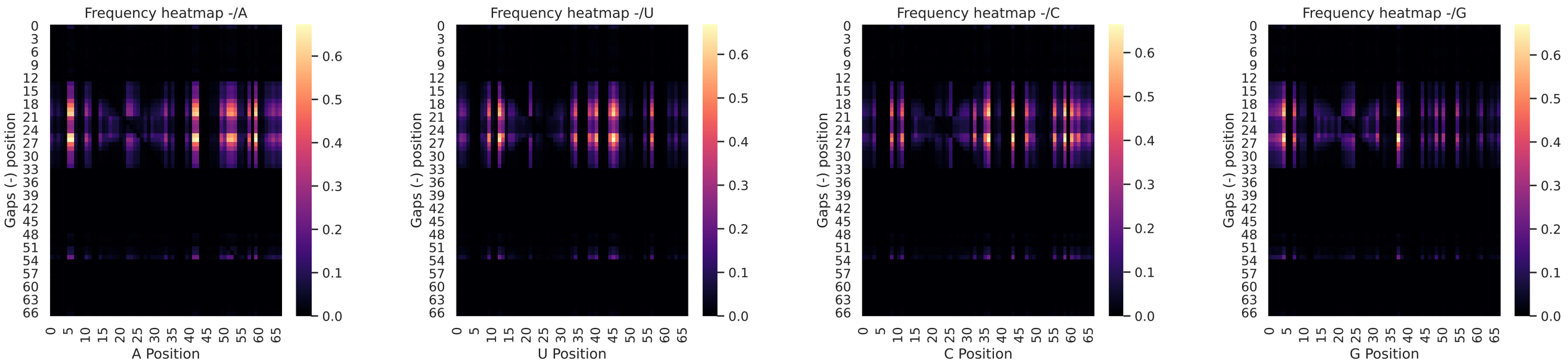

Couplings heatmap for -/-
Unbiased generated gaps' couplings
Biased generated data gaps' couplings
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66
4 3 2 1 0 −1 −2

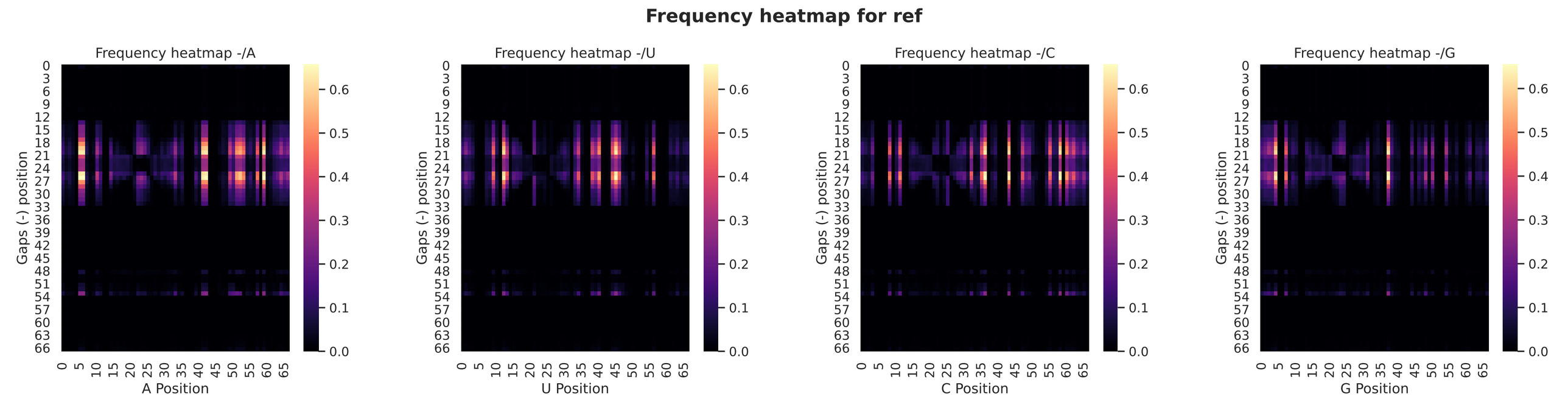

Couplings heatmap for Unbiased
Coupling heatmap -/A
Gaps (-) position
A Position
Coupling heatmap -/U
Gaps (-) position
U Position
Coupling heatmap -/C
Gaps (-) position
C Position
Coupling heatmap -/G
Gaps (-) position
G Position

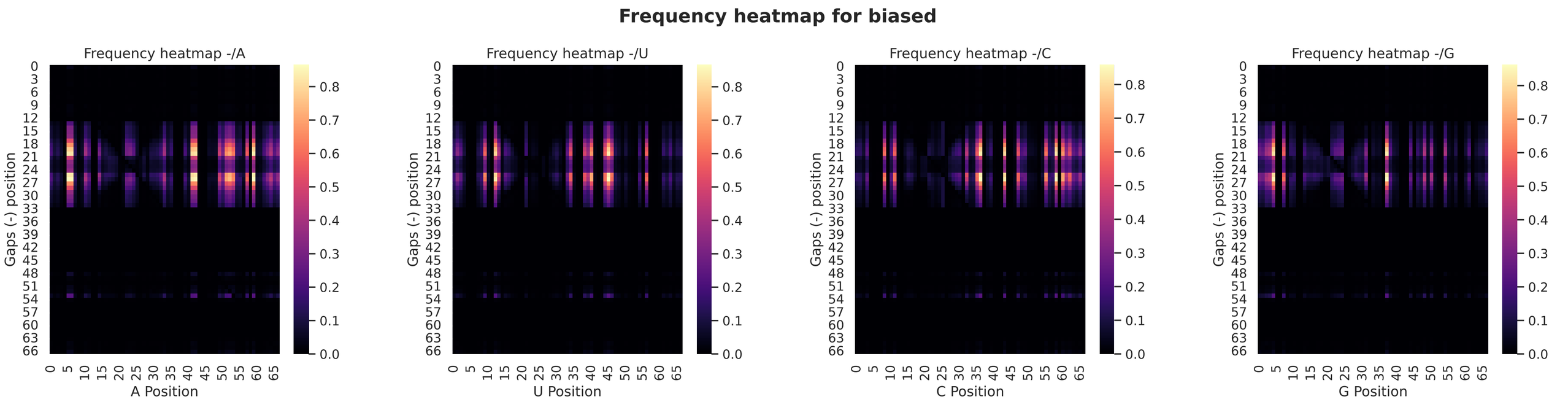

Couplings heatmap for biased
Coupling heatmap -/A
Gaps (-) position
A Position
Coupling heatmap -/U
Gaps (-) position
U Position
Coupling heatmap -/C
Gaps (-) position
C Position
Coupling heatmap -/G
Gaps (-) position
G Position


Gaps' frequency depending on position in the MSA's sequences
ref
bias
unbias
Gap frequency
0
500
1000
1500
2000
0
10
20
30
40
50
60
70
Sequence position


Unbiased generated gaps' frequency
Reference data gaps' frequency
Biased generated data gaps' frequency
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
1.0 0.8 0.6 0.4 0.2 0.0


Frequency heatmap for Unbiased
Frequency heatmap -/A
Frequency heatmap -/U
Frequency heatmap -/C
Frequency heatmap -/G
Gaps (-) position
A Position
U Position
C Position
G Position


Frequency heatmap for ref
Frequency heatmap -/A
Frequency heatmap -/U
Frequency heatmap -/C
Frequency heatmap -/G
Gaps (-) position
A Position
U Position
C Position
G Position


Frequency heatmap for biased
Frequency heatmap -/A
Frequency heatmap -/U
Frequency heatmap -/C
Frequency heatmap -/G
Gaps (-) position
A Position
U Position
C Position
G Position