# Lovebirds use their neck to stabilize their head mid-flight

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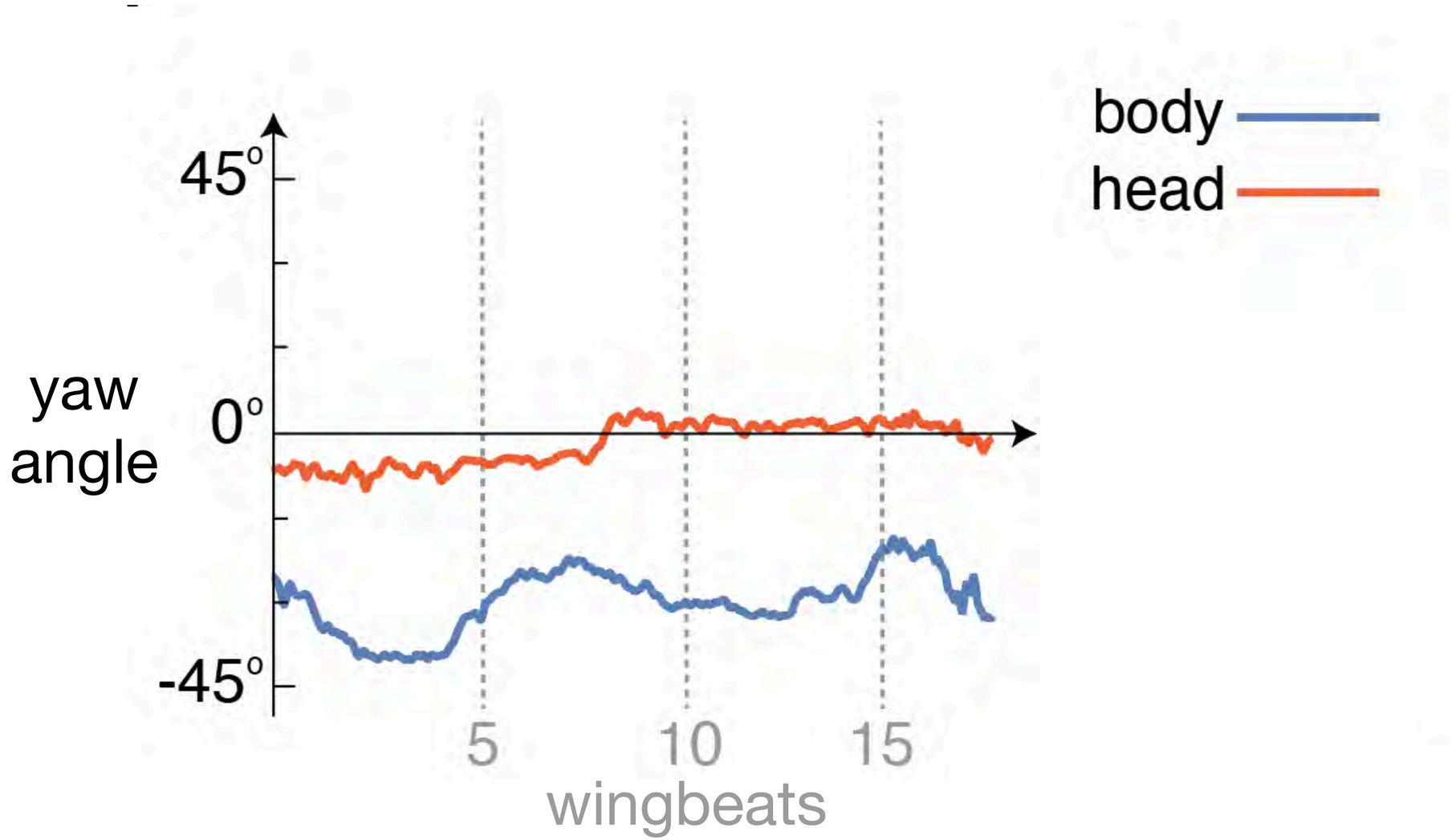

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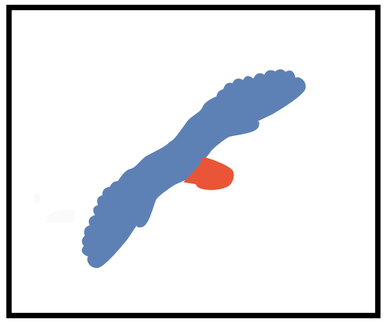
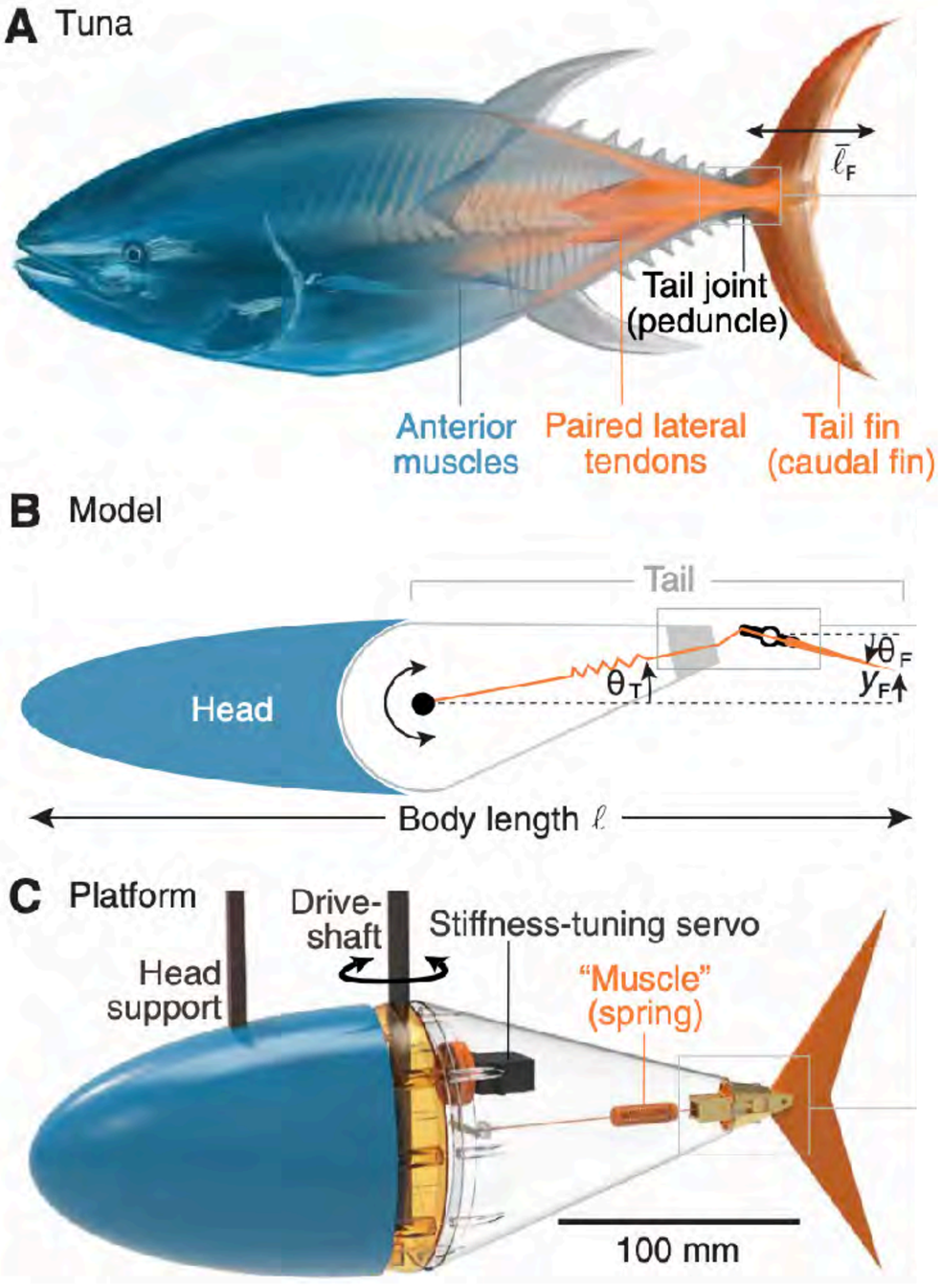
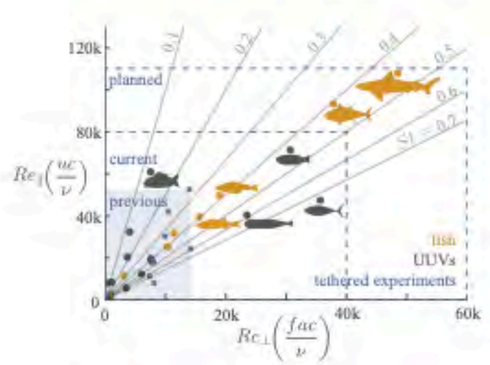
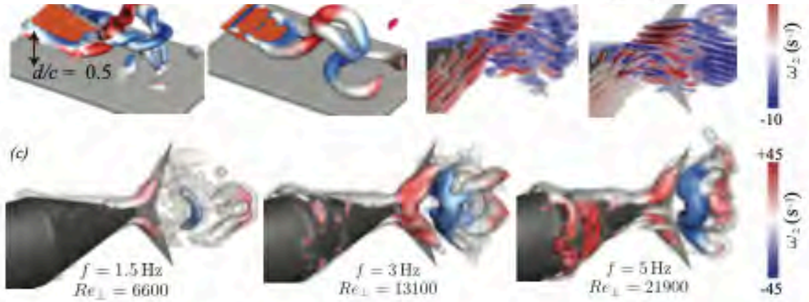
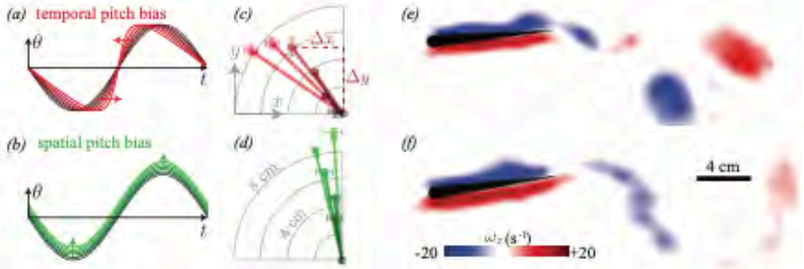


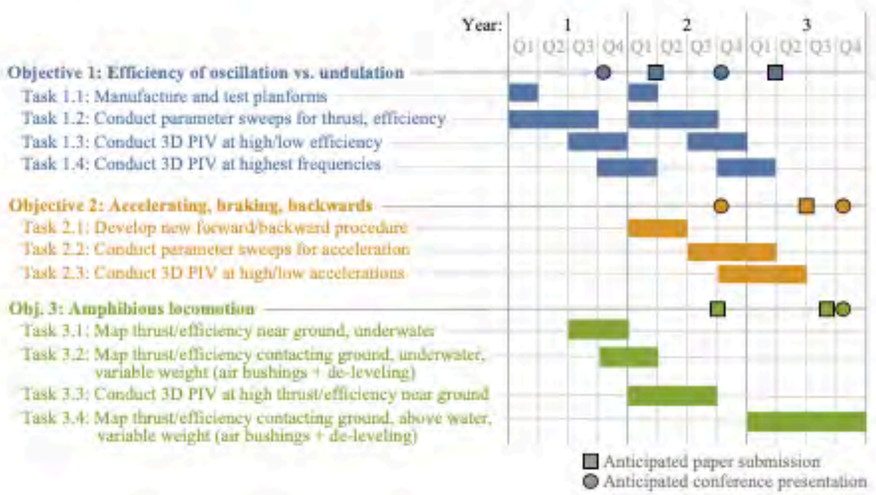

A Tuna
$\bar{\ell}_F$
Tail joint
(peduncle)
Anterior
muscles
Paired lateral
tendons
Tail fin
(caudal fin)
B Model
Tail
Head
$\theta_T$
$\theta_F$
$y_F$
Body length $\ell$
C Platform
Drive-
shaft
Stiffness-tuning servo
Head
support
"Muscle"
(spring)
100 mm

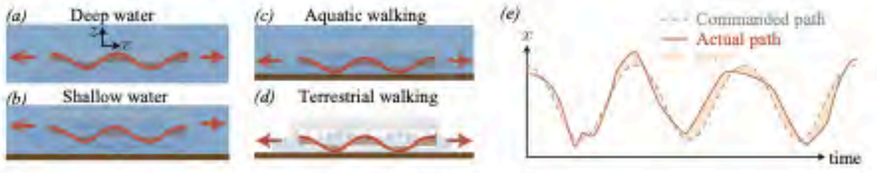
# Consider having one PDF with all your figures for a project:





*Guideline 5:*

**Colors should be soft, intuitive, accessible, and consistent.**

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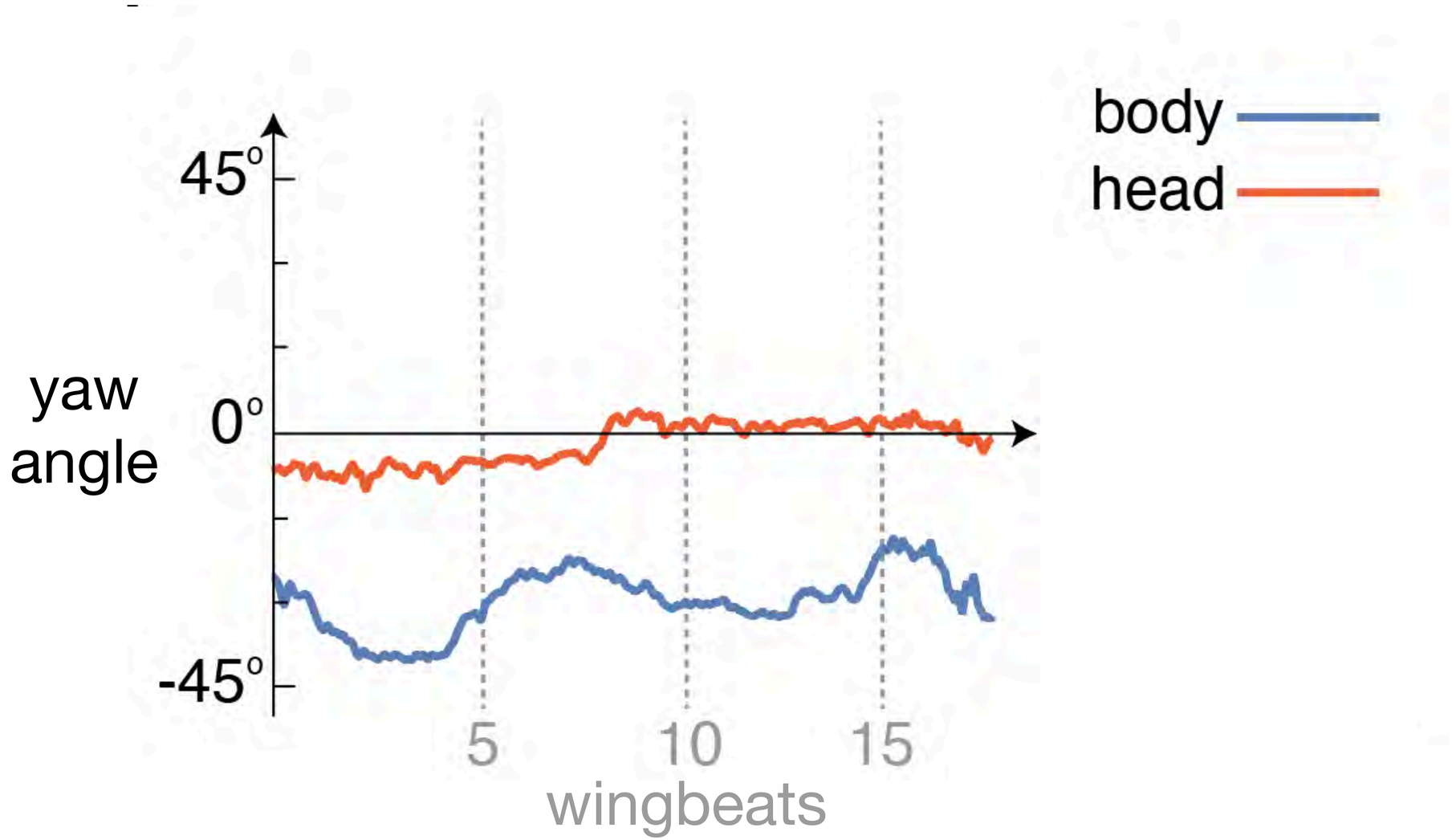

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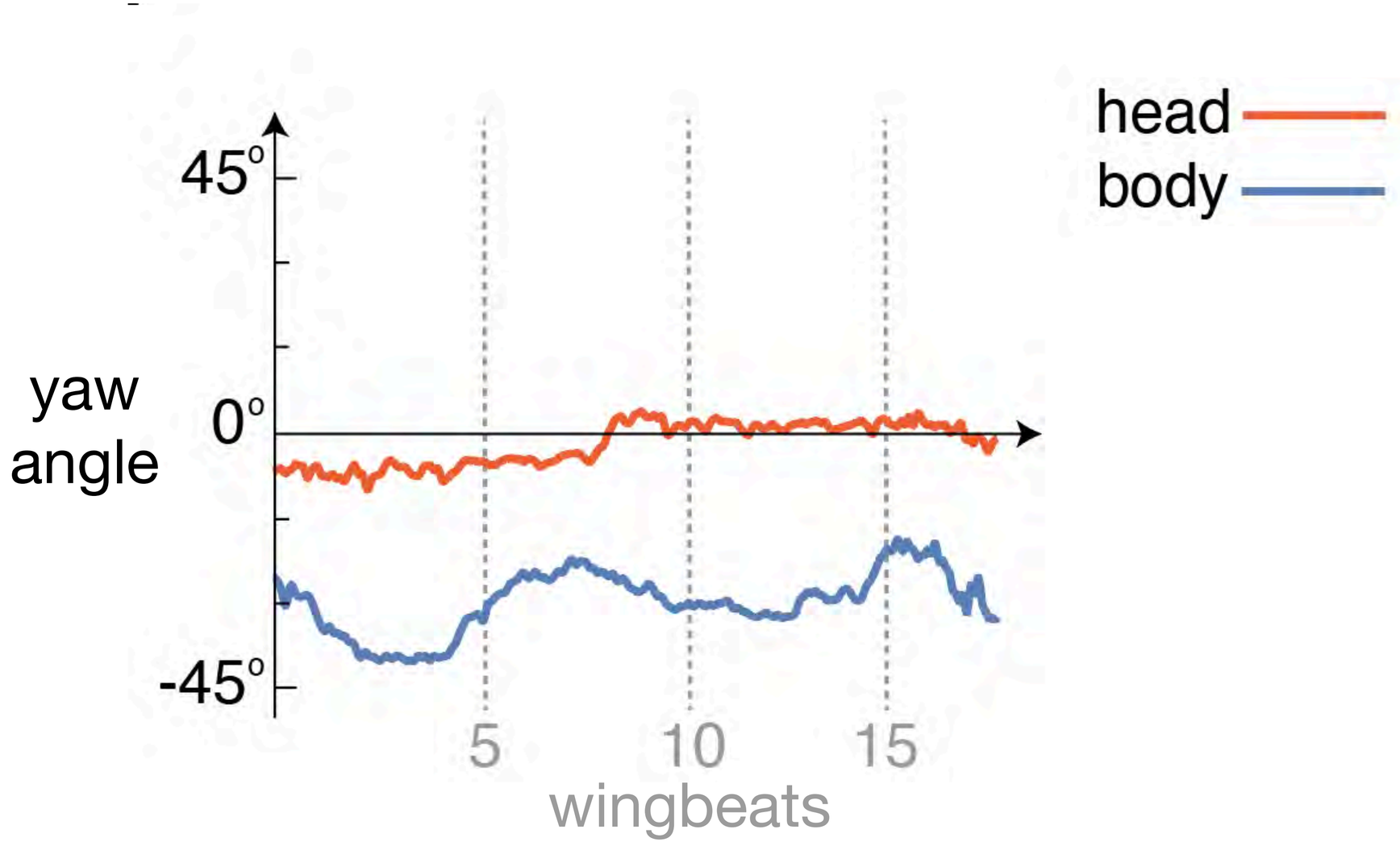

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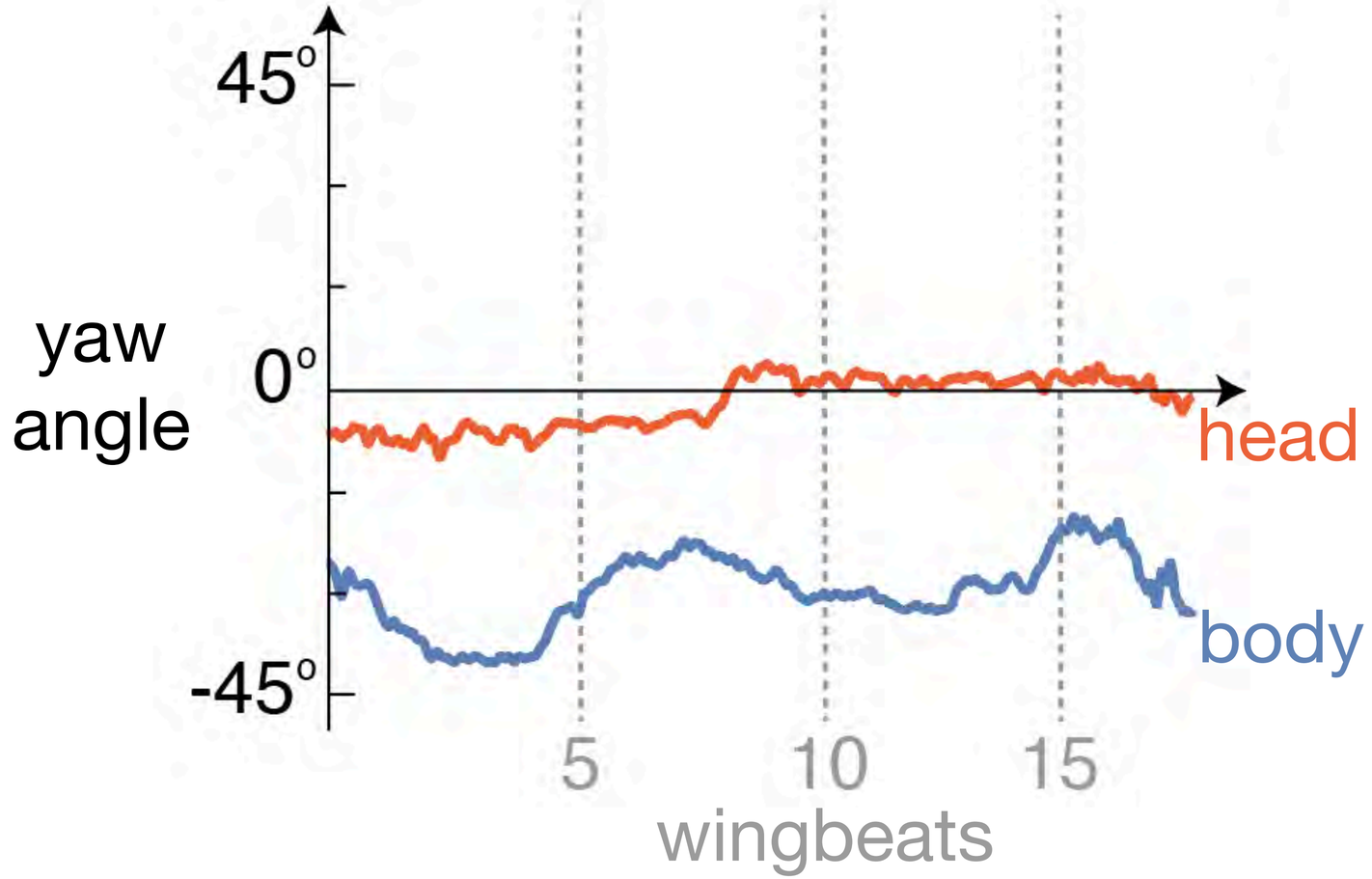
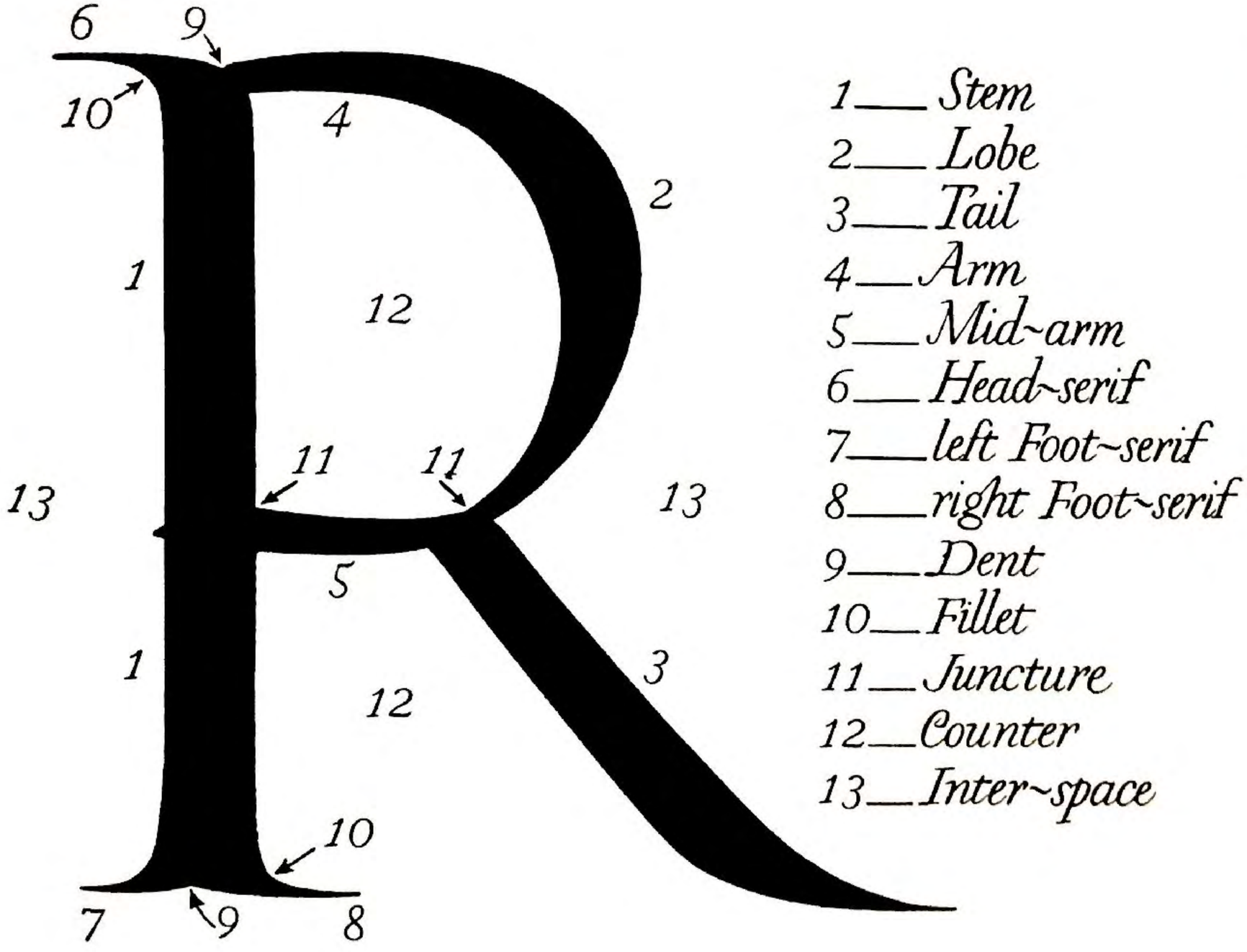
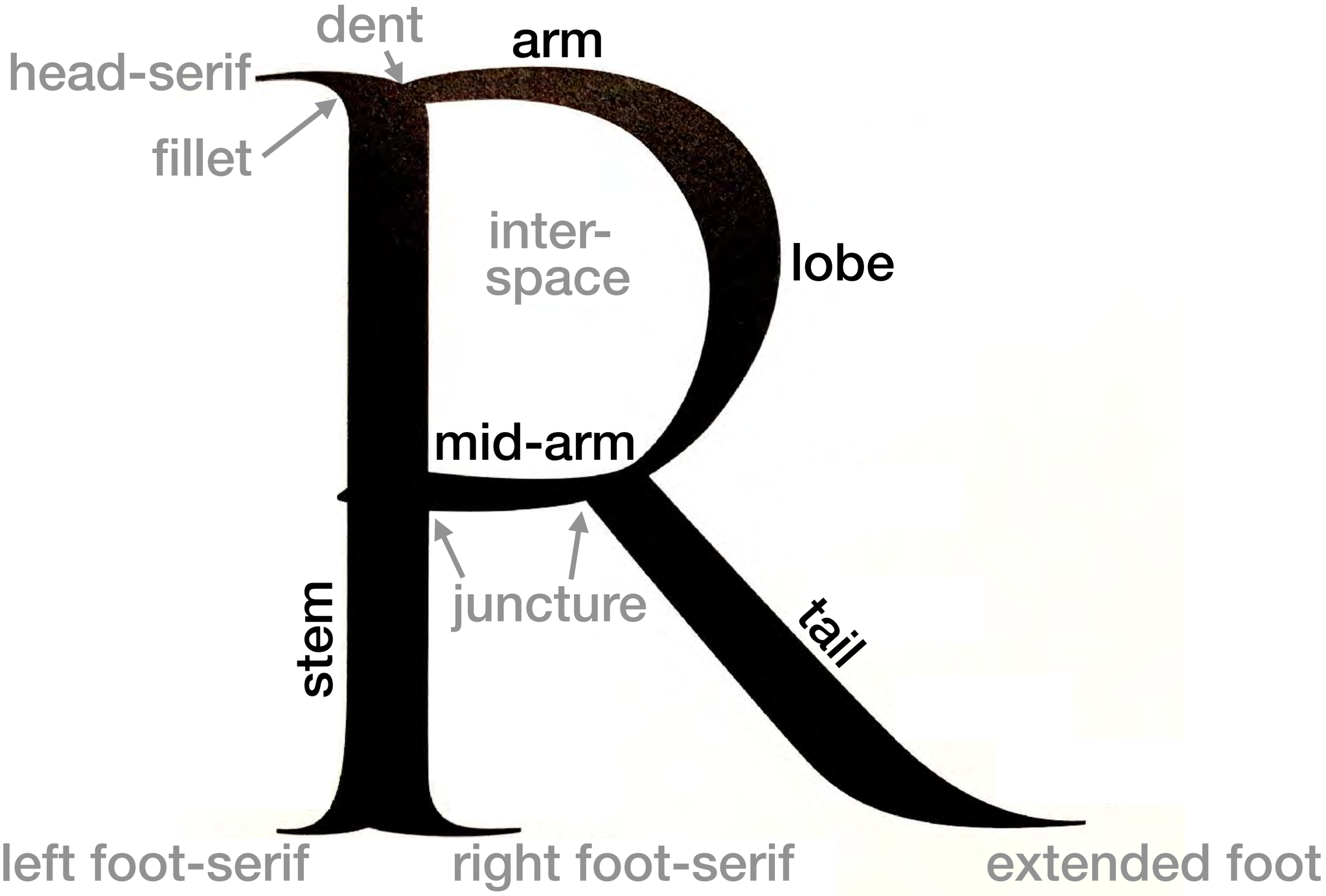





1 — Stem
2 — Lobe
3 — Tail
4 — Arm
5 — Mid-arm
6 — Head-serif
7 — left Foot-serif
8 — right Foot-serif
9 — Dent
10 — Fillet
11 — Juncture
12 — Counter
13 — Inter-space


dent
arm
head-serif
fillet
inter-
space
lobe
mid-arm
stem
juncture
tail
left foot-serif
right foot-serif
extended foot

*Guideline 6:*

**Legends should be… avoided.**

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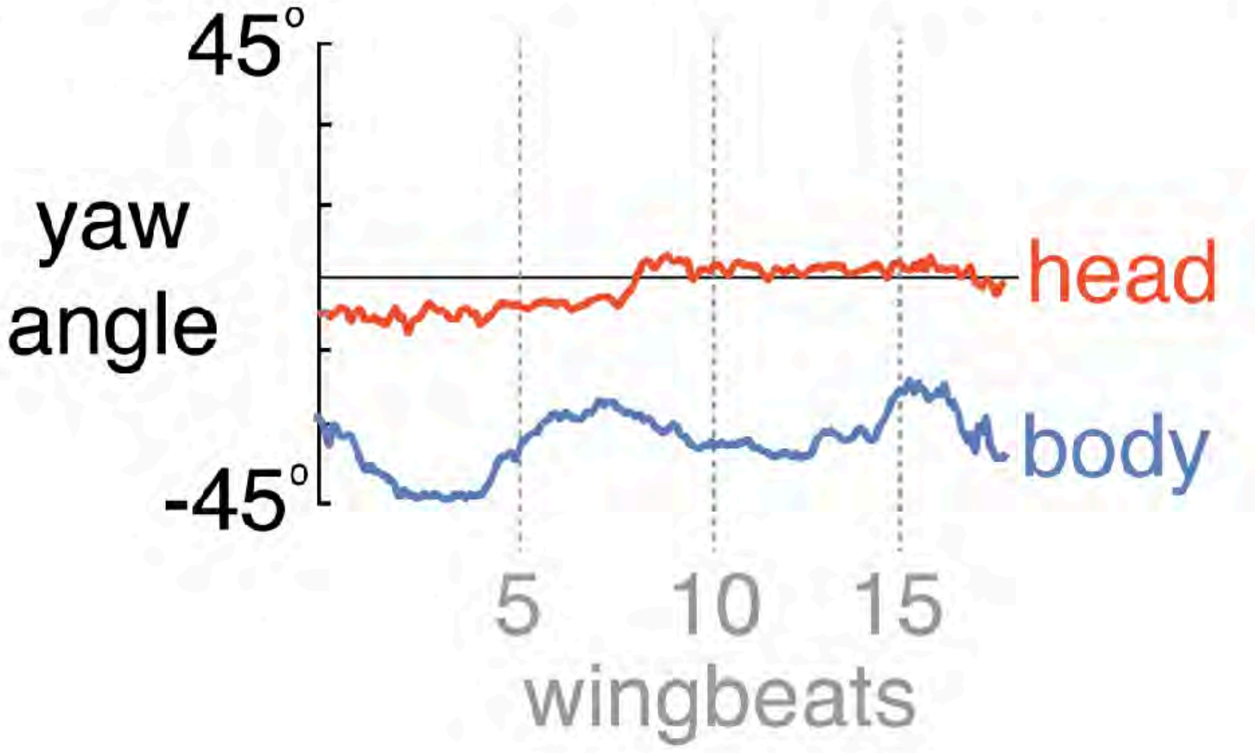

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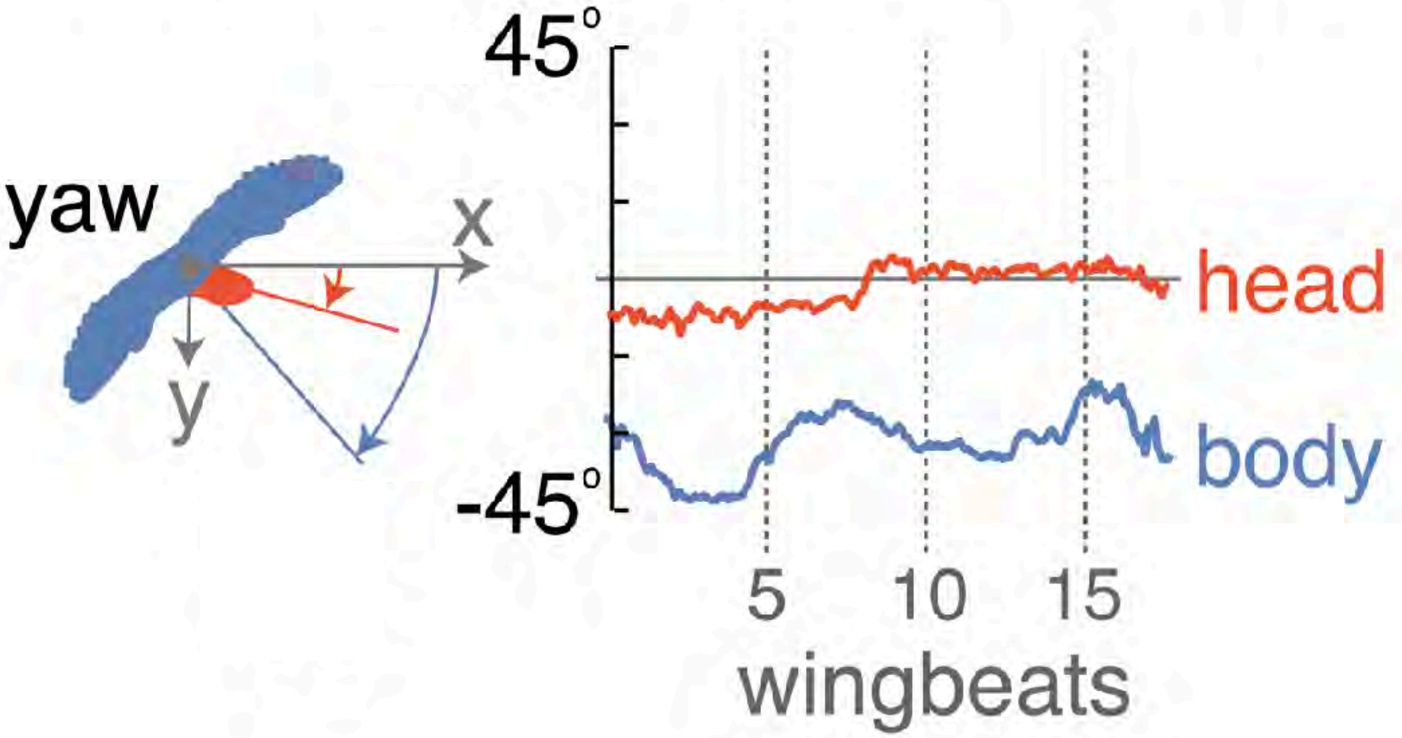

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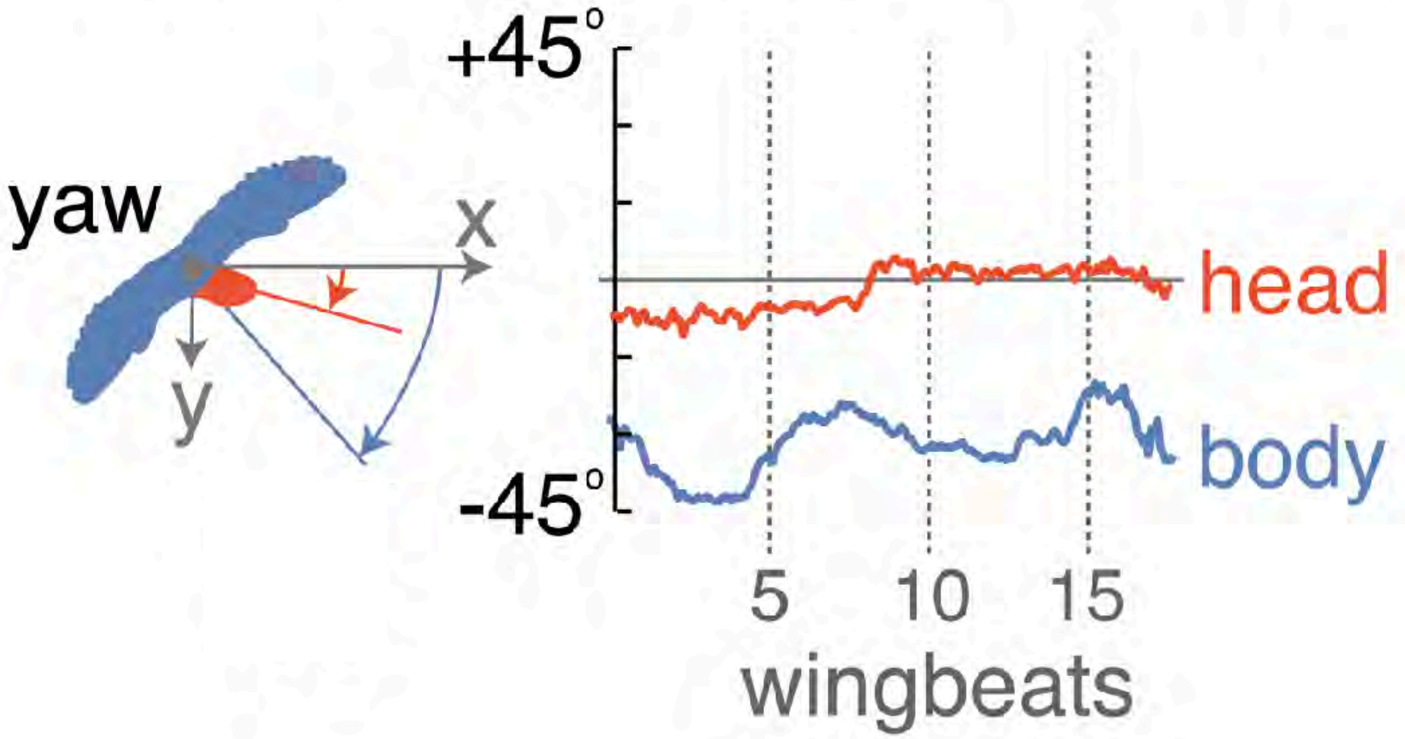

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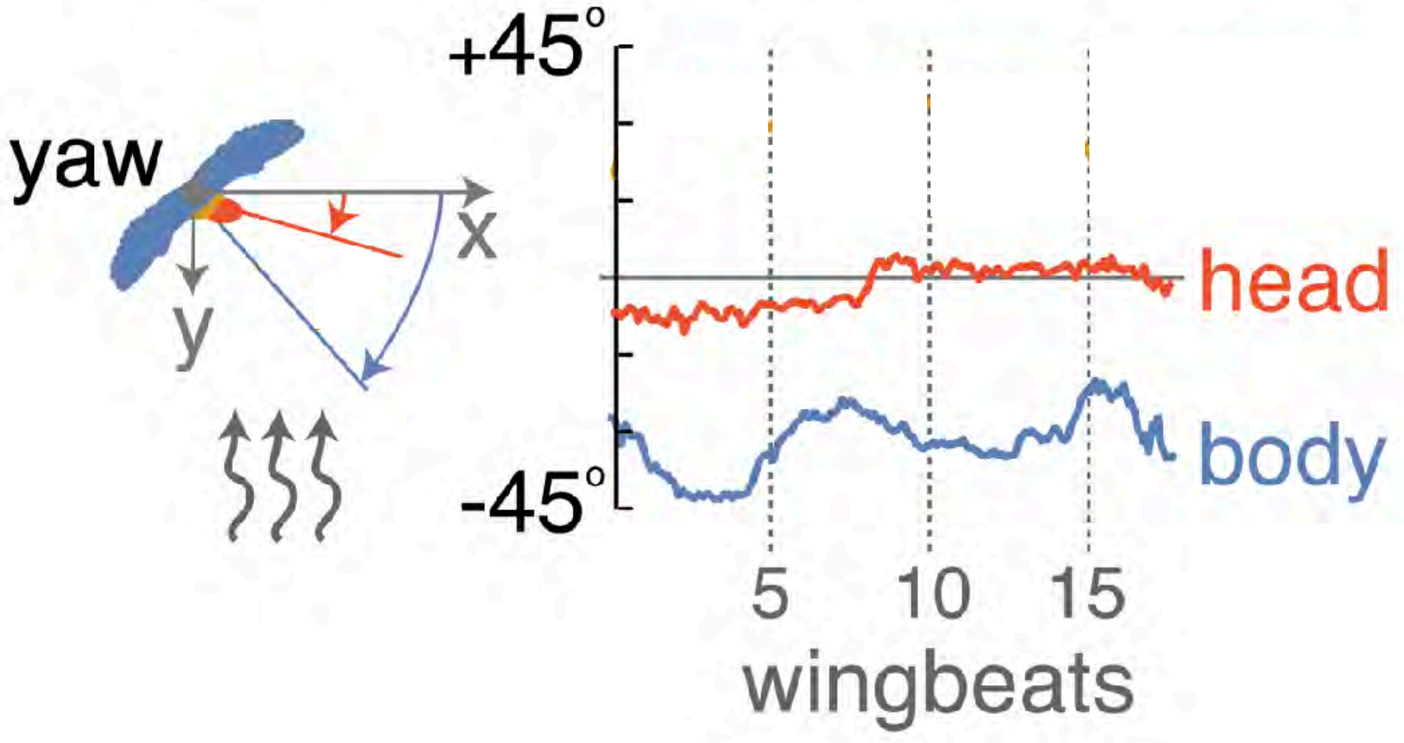
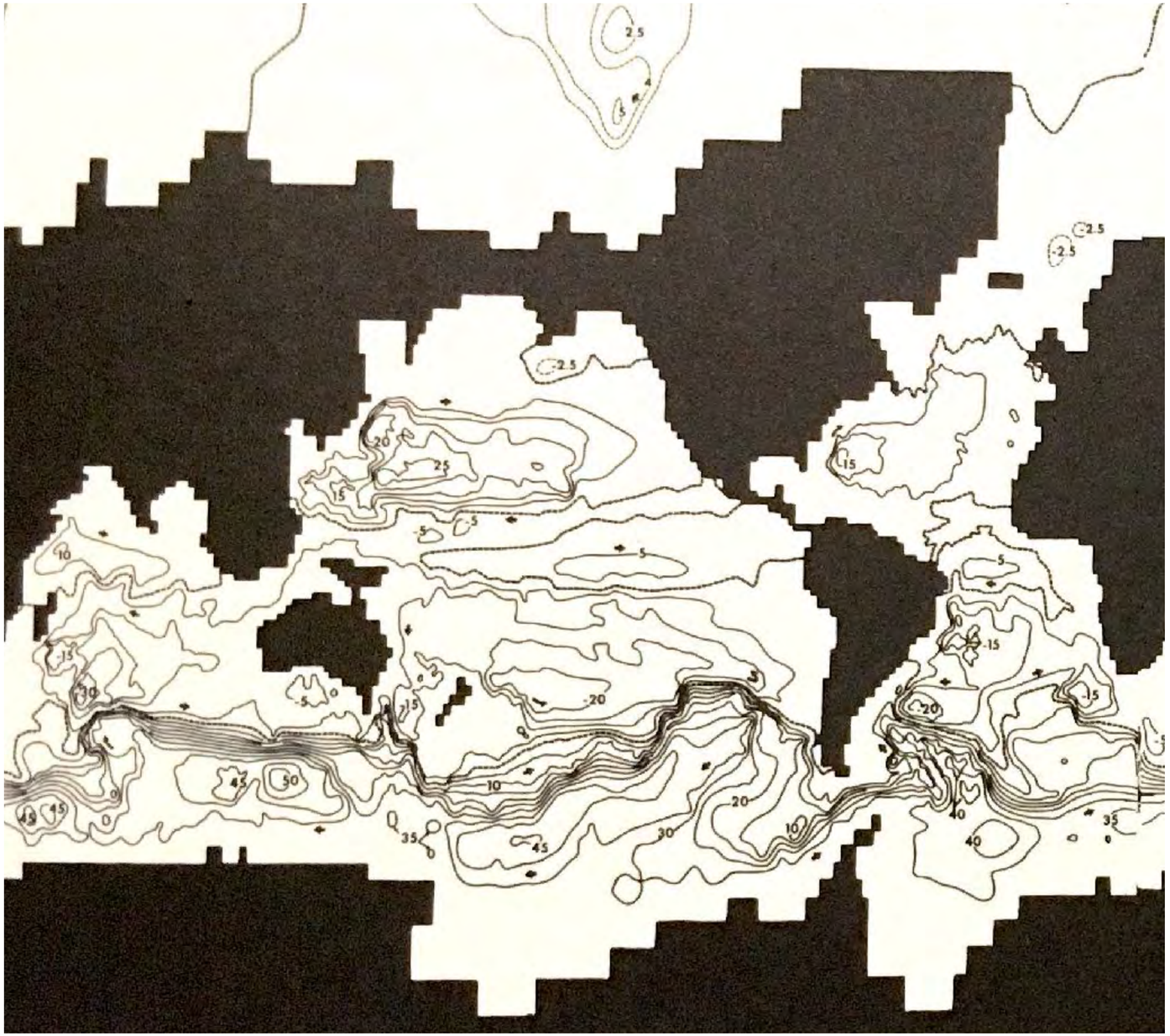
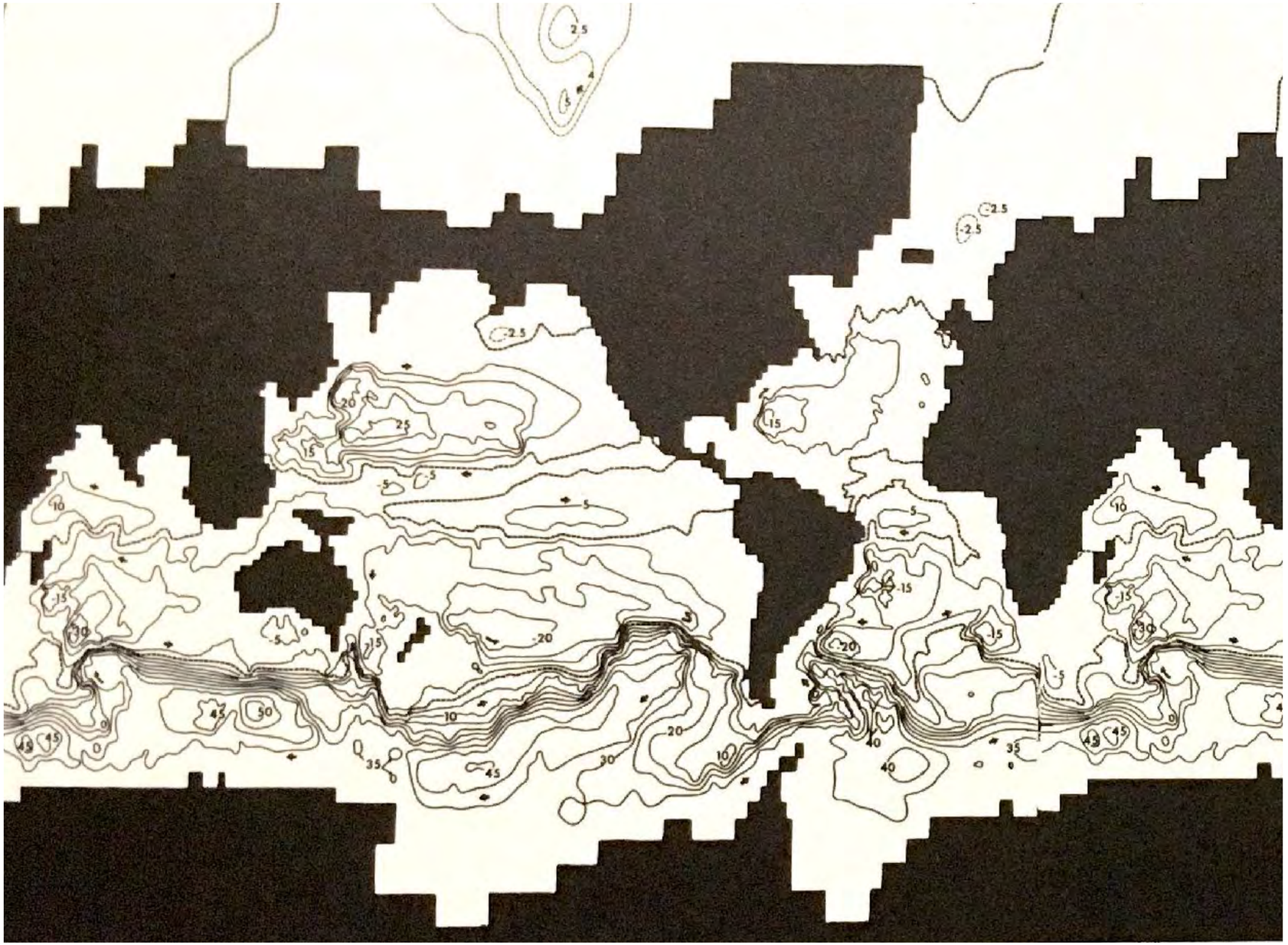



2.5
-2.5
2.5
2.5
20
25
15
-5
5
10
-15
30
-5
15
-20
5
-15
-20
-15
45
30
10
20
40
45
0
35
45
30
10
40
35

*Tufte, 1983*


2.5
-2.5
2.5
-2.5
20
25
15
-5
5
10
-15
30
-5
15
-20
10
45
30
45
0
35
45
30
20
10
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0
-15
-20
-15
-5
10
30

*Tufte, 1983*

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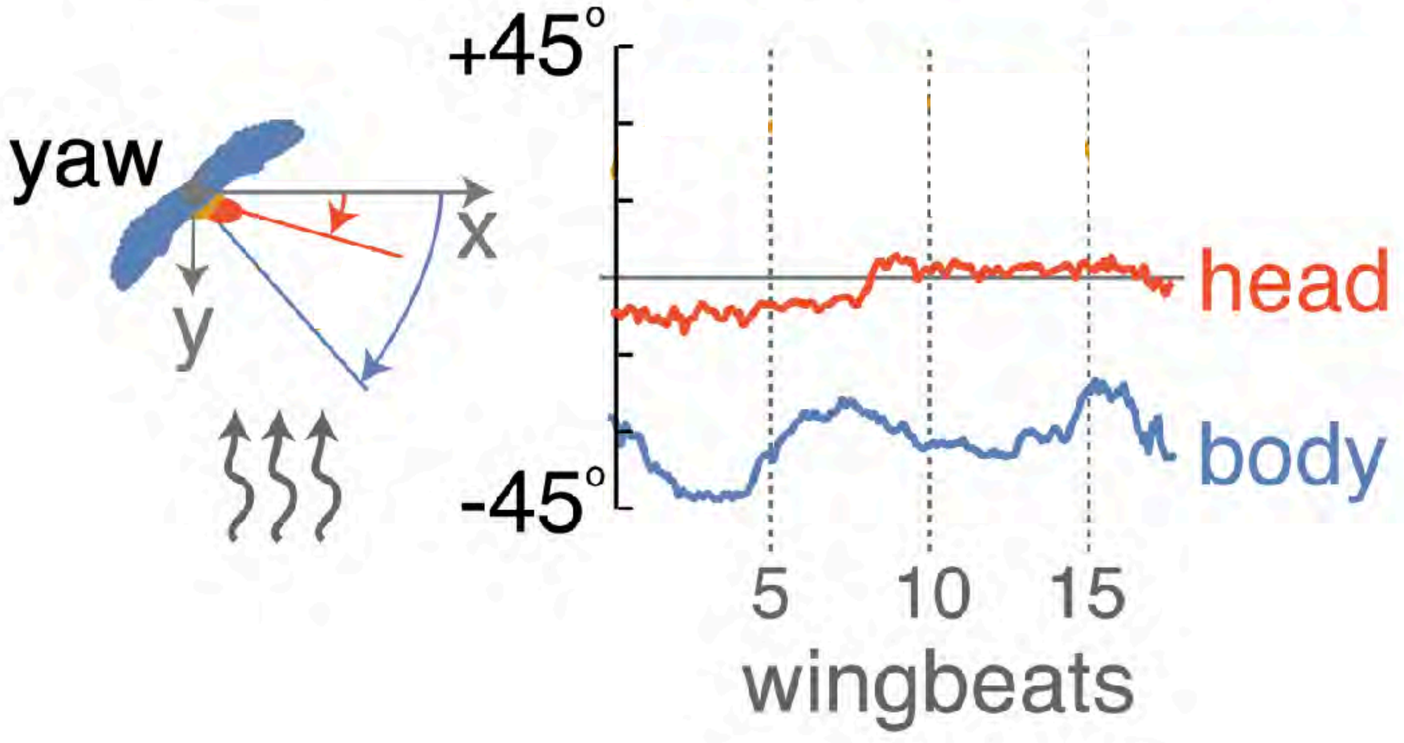

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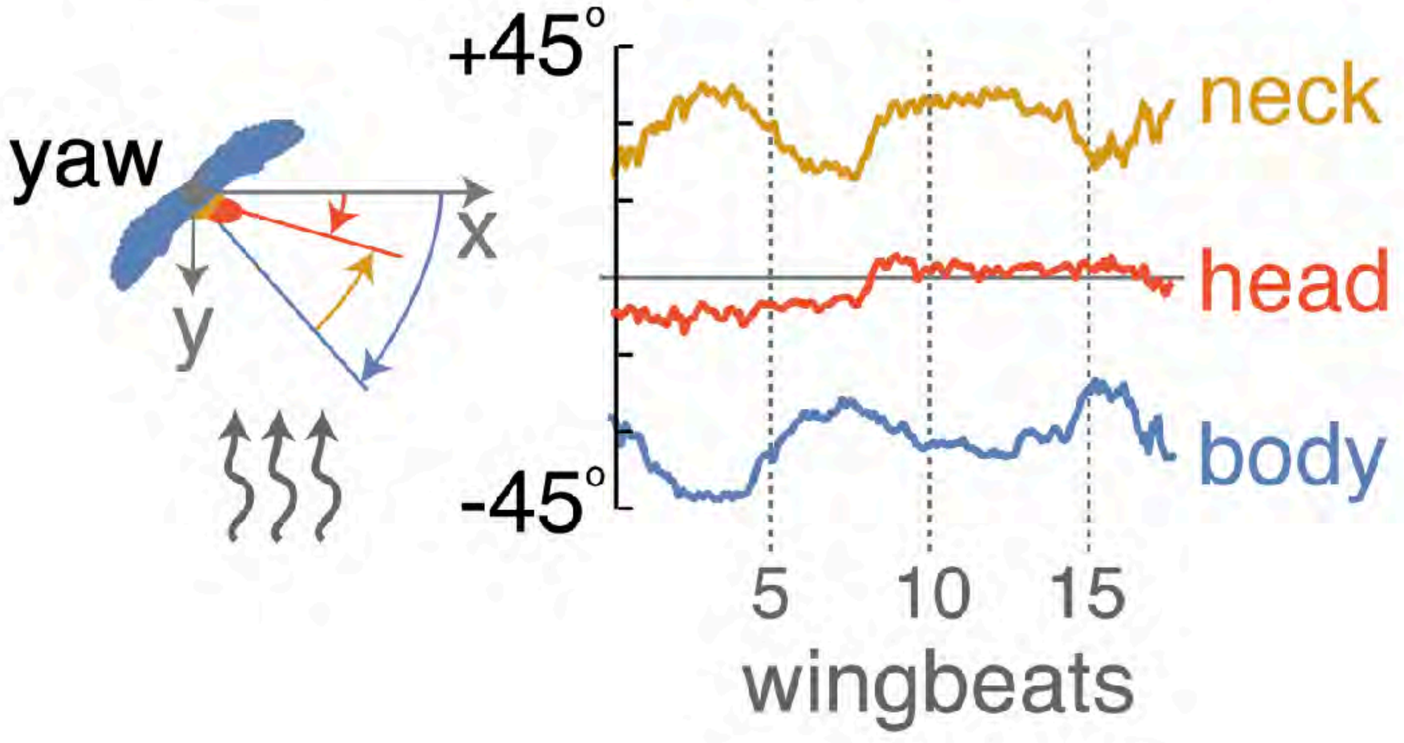

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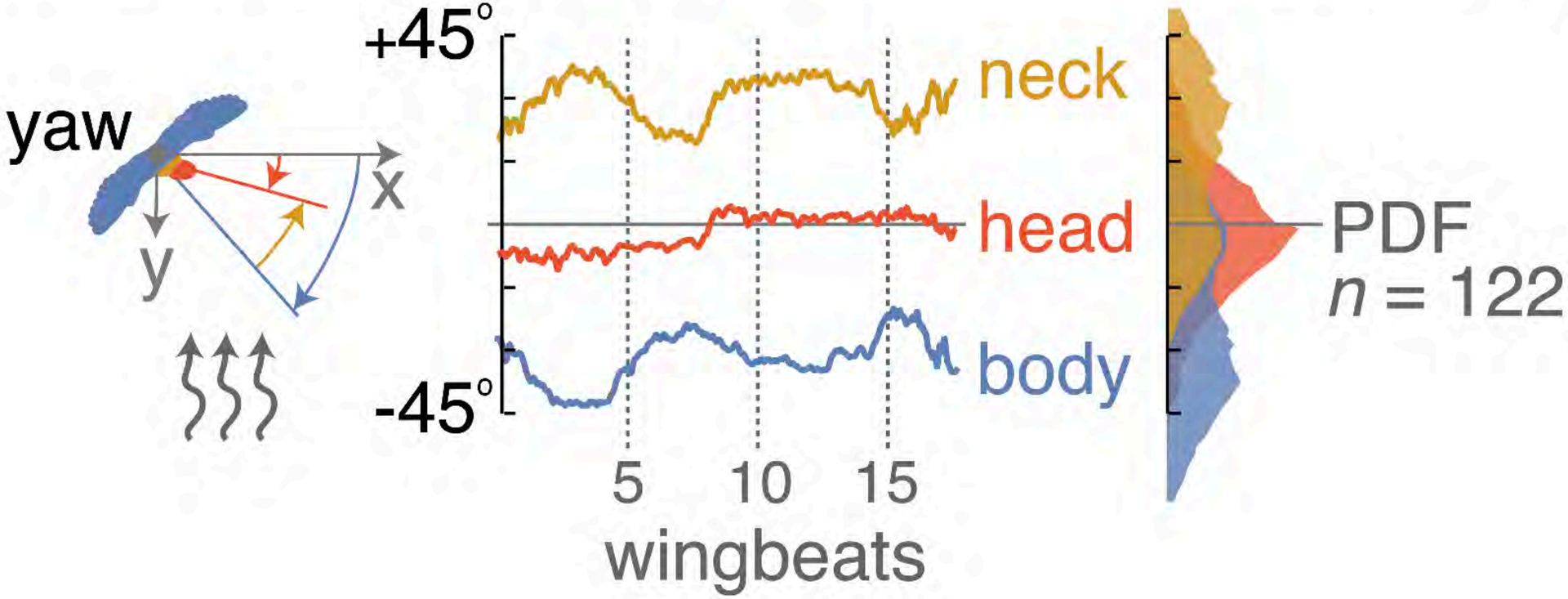


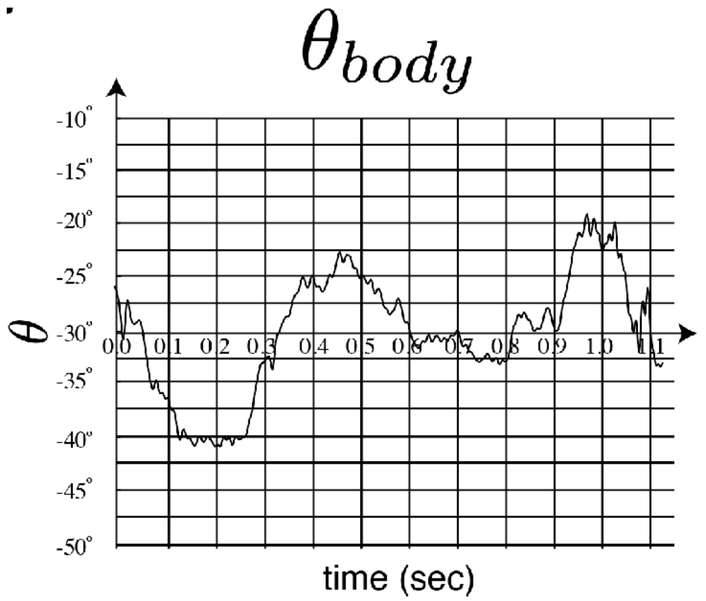
*Guideline 7:*

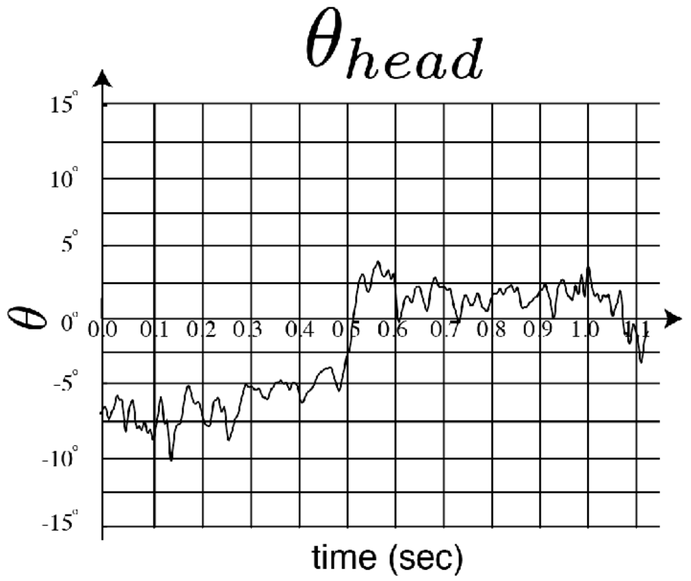
**“To clarify, add detail…”**

“…Imagine that, to clarify, add detail. Clutter and overload are not attributes of information, they are failures of design.”

- Edward Tufte

# Results

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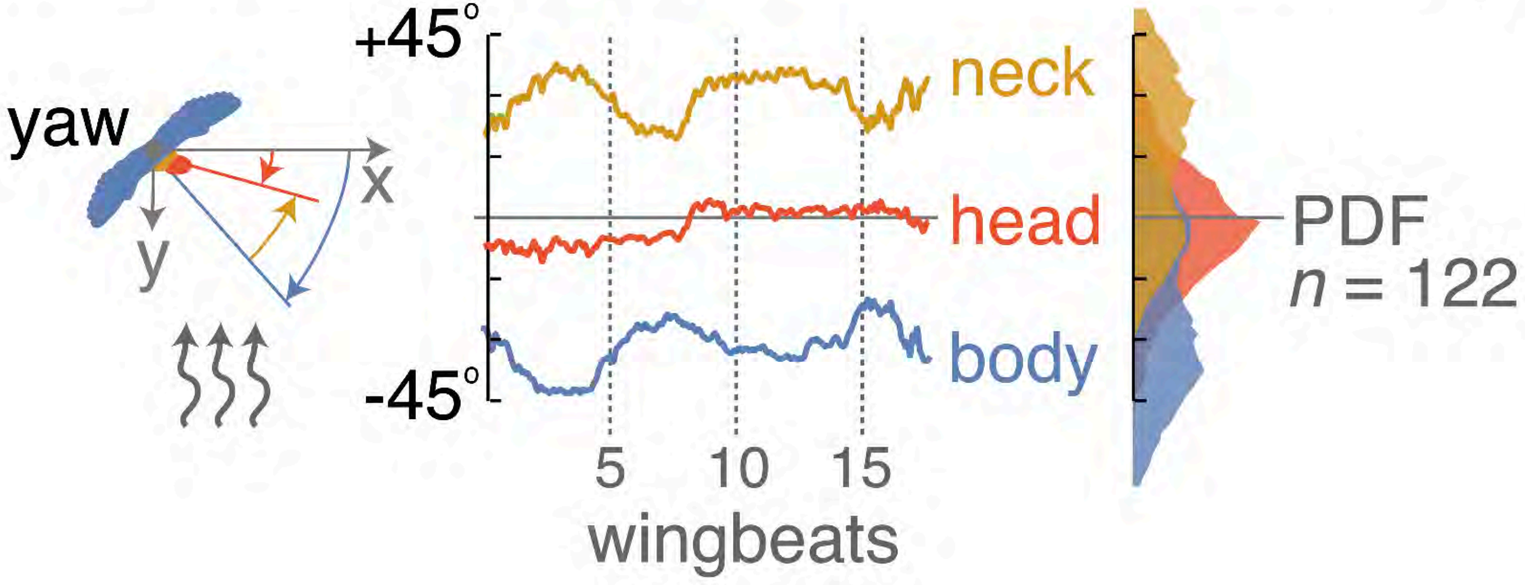

# Guiding Principles of Technical Figure Design:

1) Titles: short sentence that summarizes key takeaway.
2) Scrutinize all dataless ink
3) Text: big, consistent, stylized deliberately, variable lean, horizontal.
4) Axes: zeroed, aligned/overlapped, intuitively ticked.
5) Colors: soft, intuitive, accessible, consistent.
6) Avoid legends.
7) “To clarify, add detail.”