

Designing a Transcription Font for Mouth Actions in Sign Languages: The Typannot Typographic System

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Adrien Contesse
Claire Danet
Patrick Doan
Morgane Rébulard
Chloé Thomas

Speakers:

Adrien Contesse
Claire Danet
Morgane Rébulard

ésad,

gestual
script,

typannot,

MINISTÈRE
DE LA CULTURE
*Liberté
Égalité
Fraternité*

Région
Hauts-de-France

AMIENS
MÉTROPOLE

DyLIS
DYNAMIQUE
DU LANGAGE
IN SITU

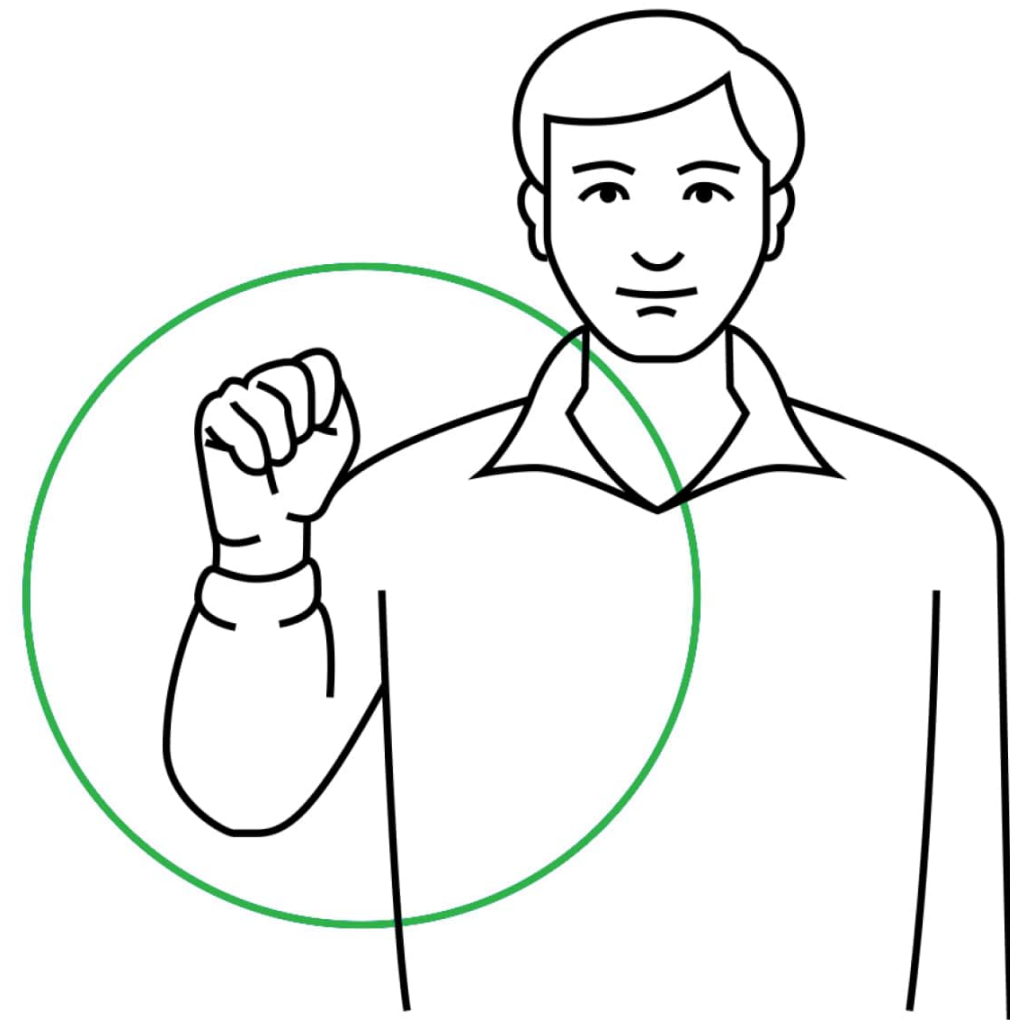
FoReLLIS
Unité de
Recherche 15076



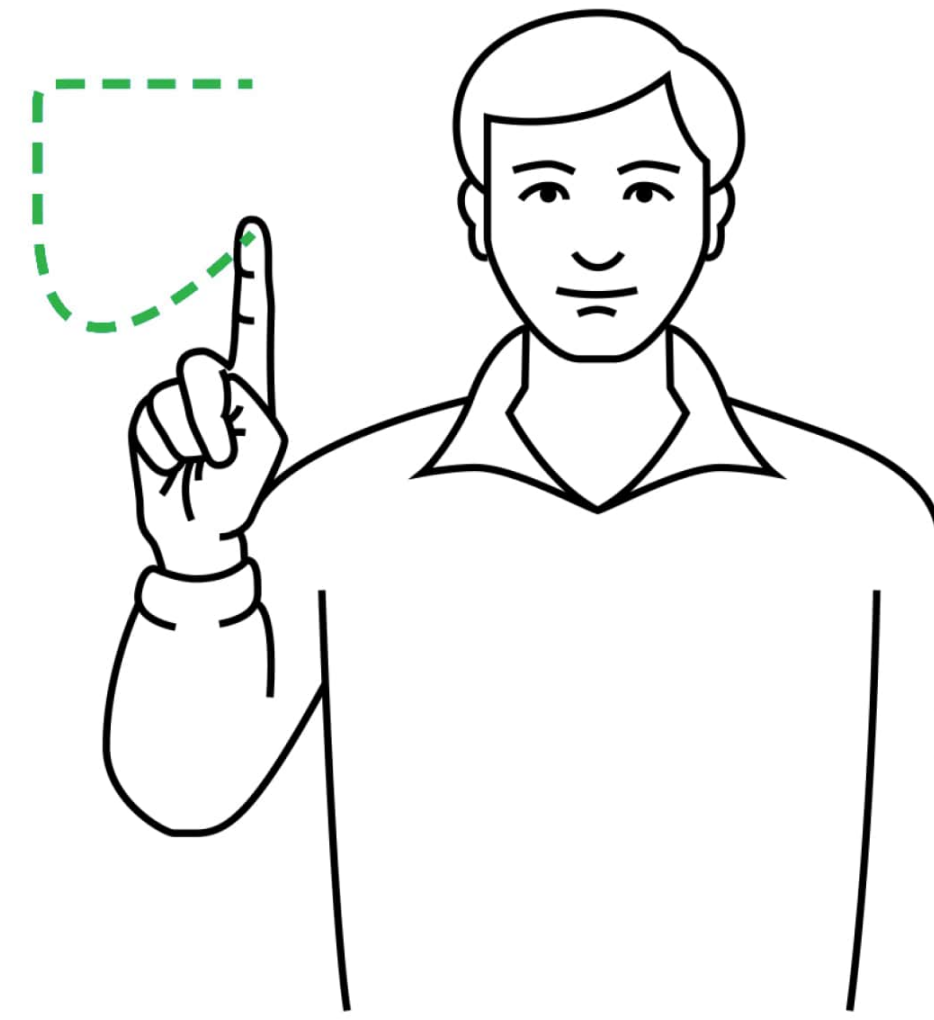




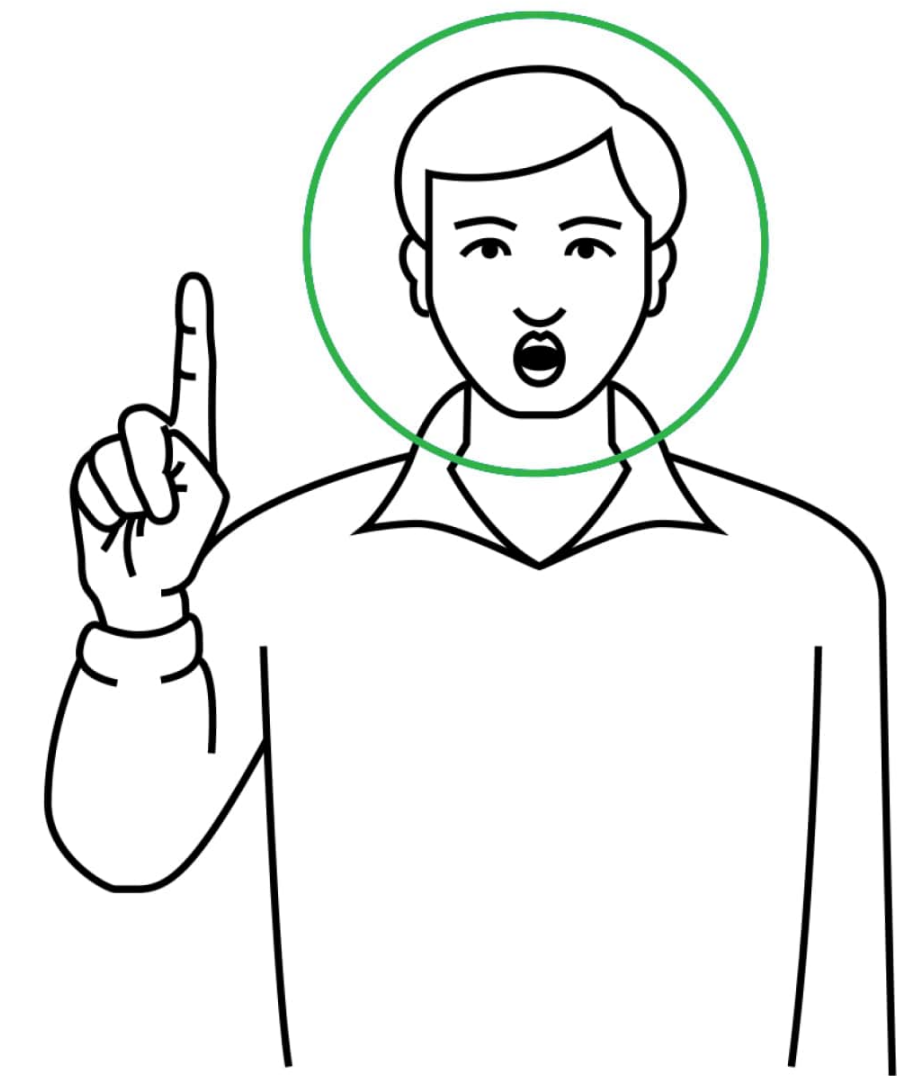
Handshape



Position

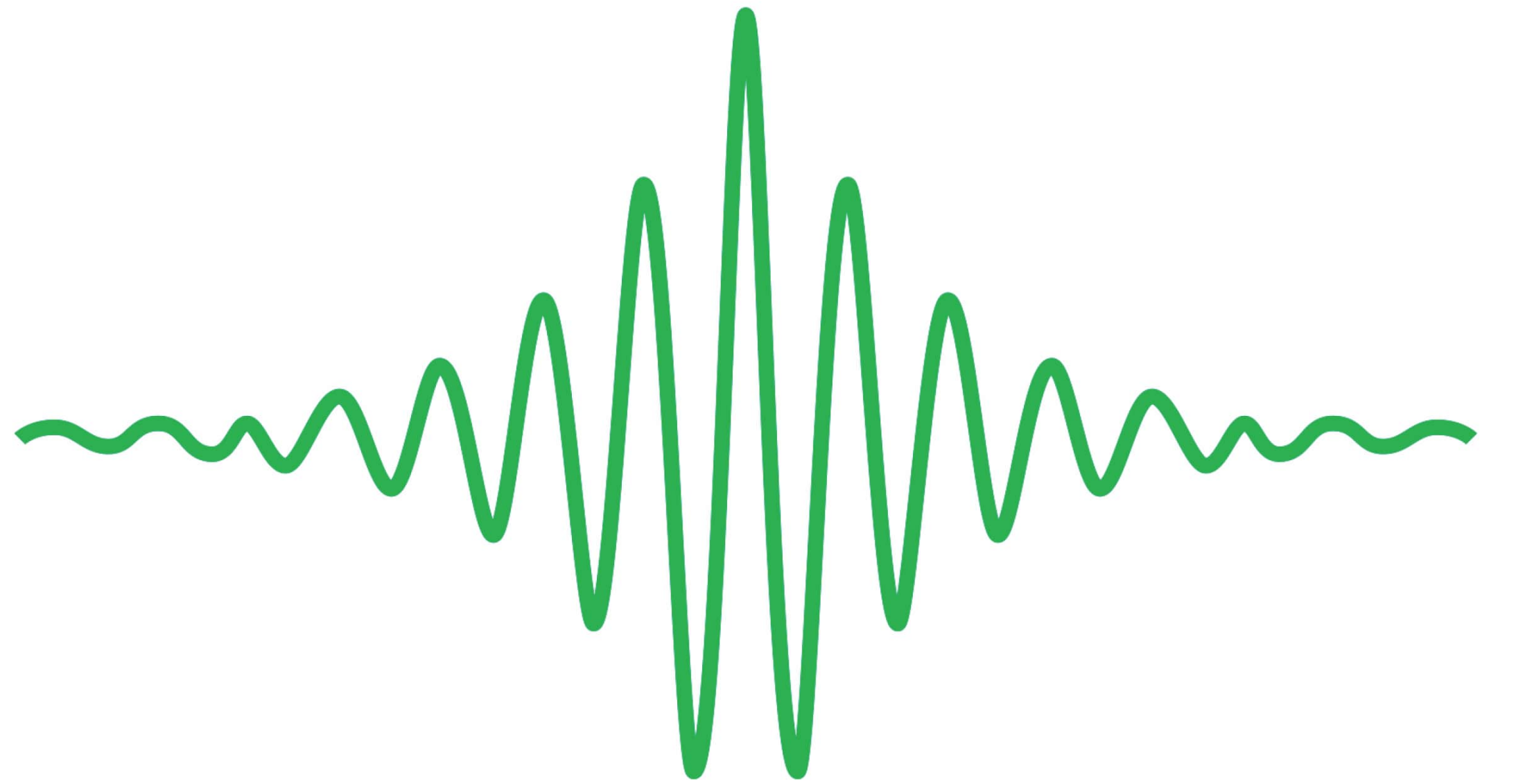
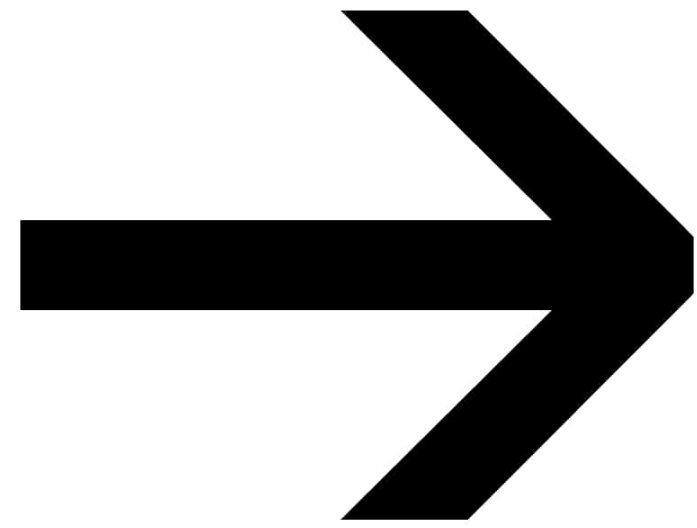


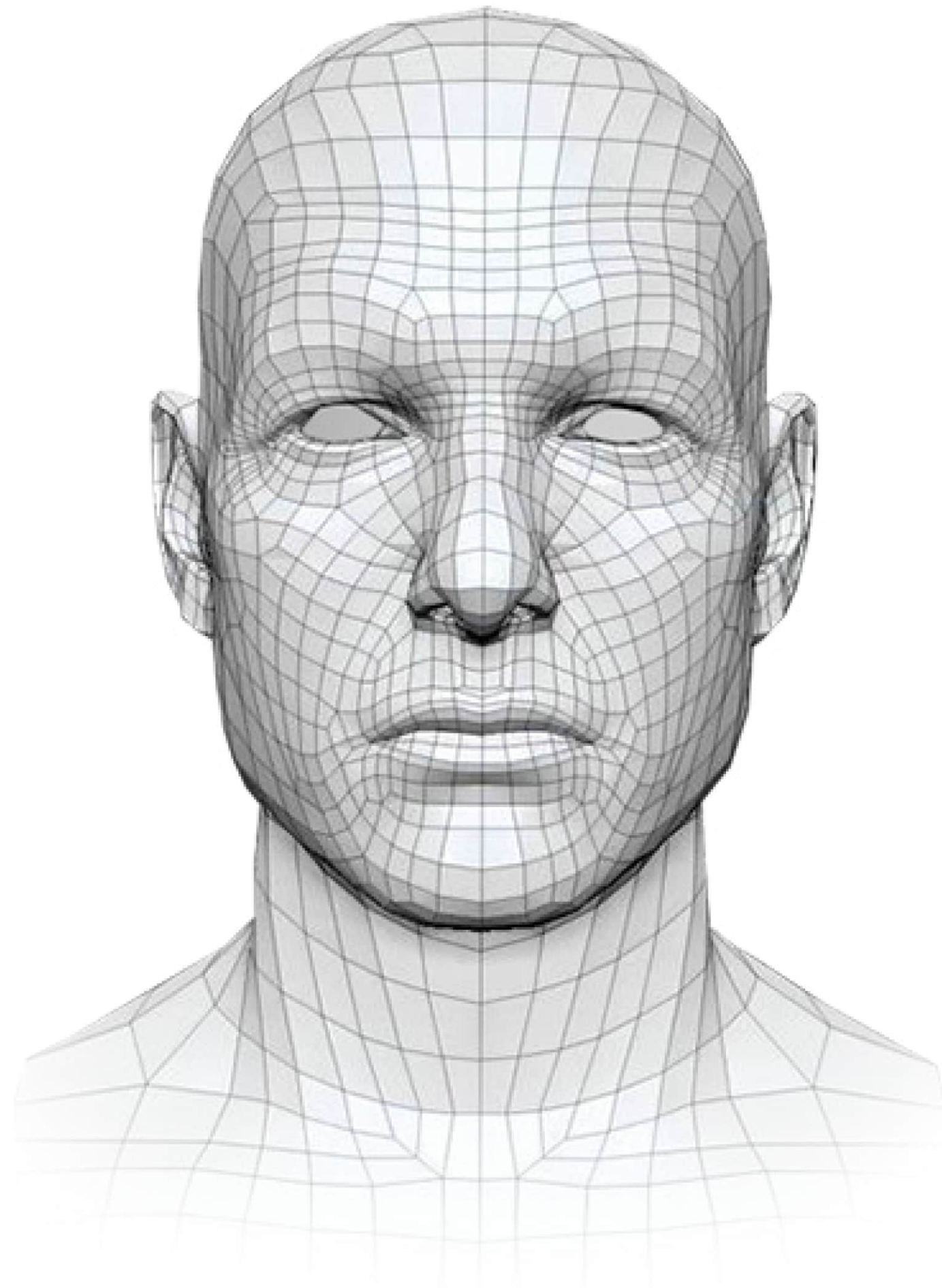
Movement

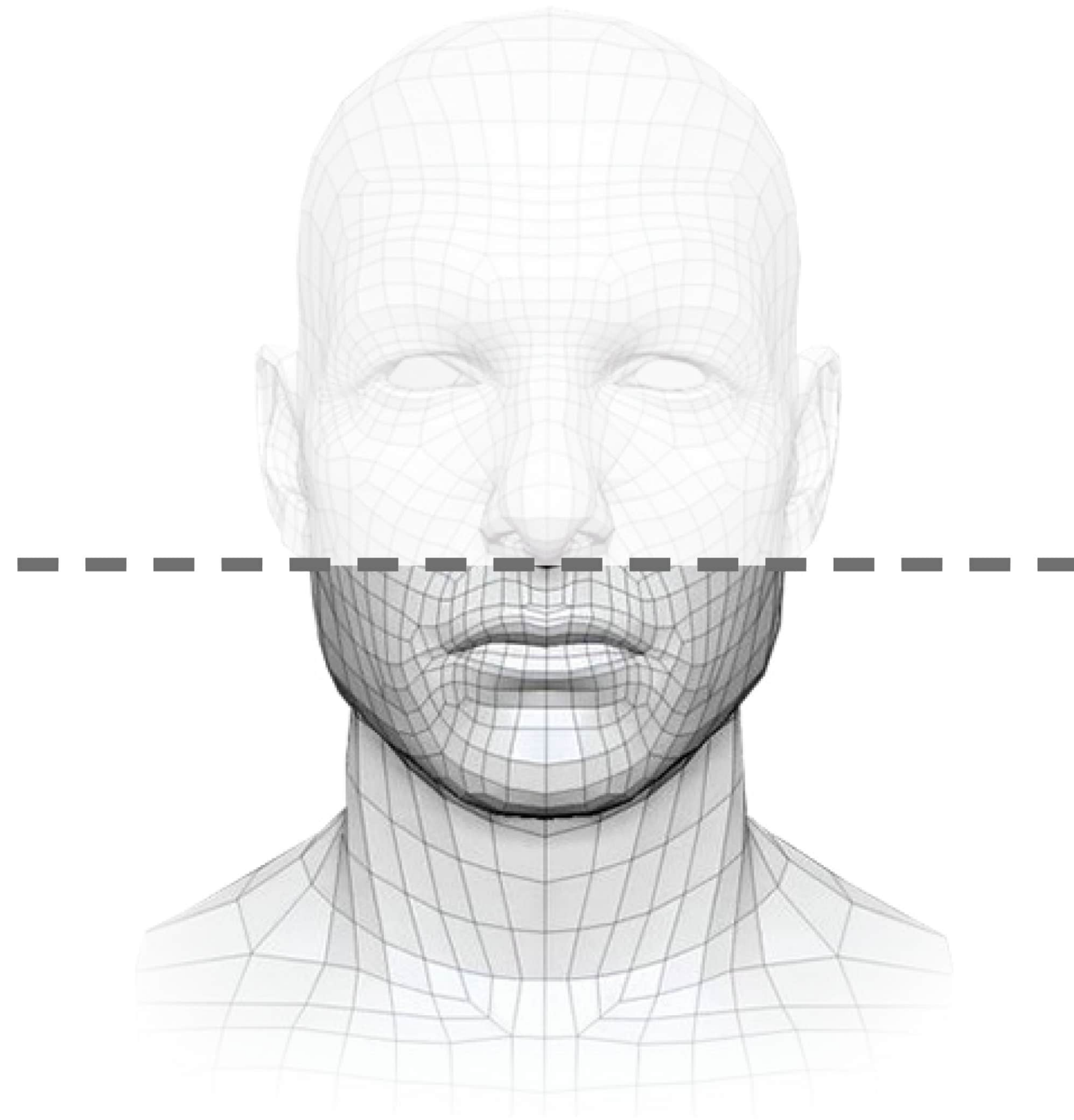


Face Action

A

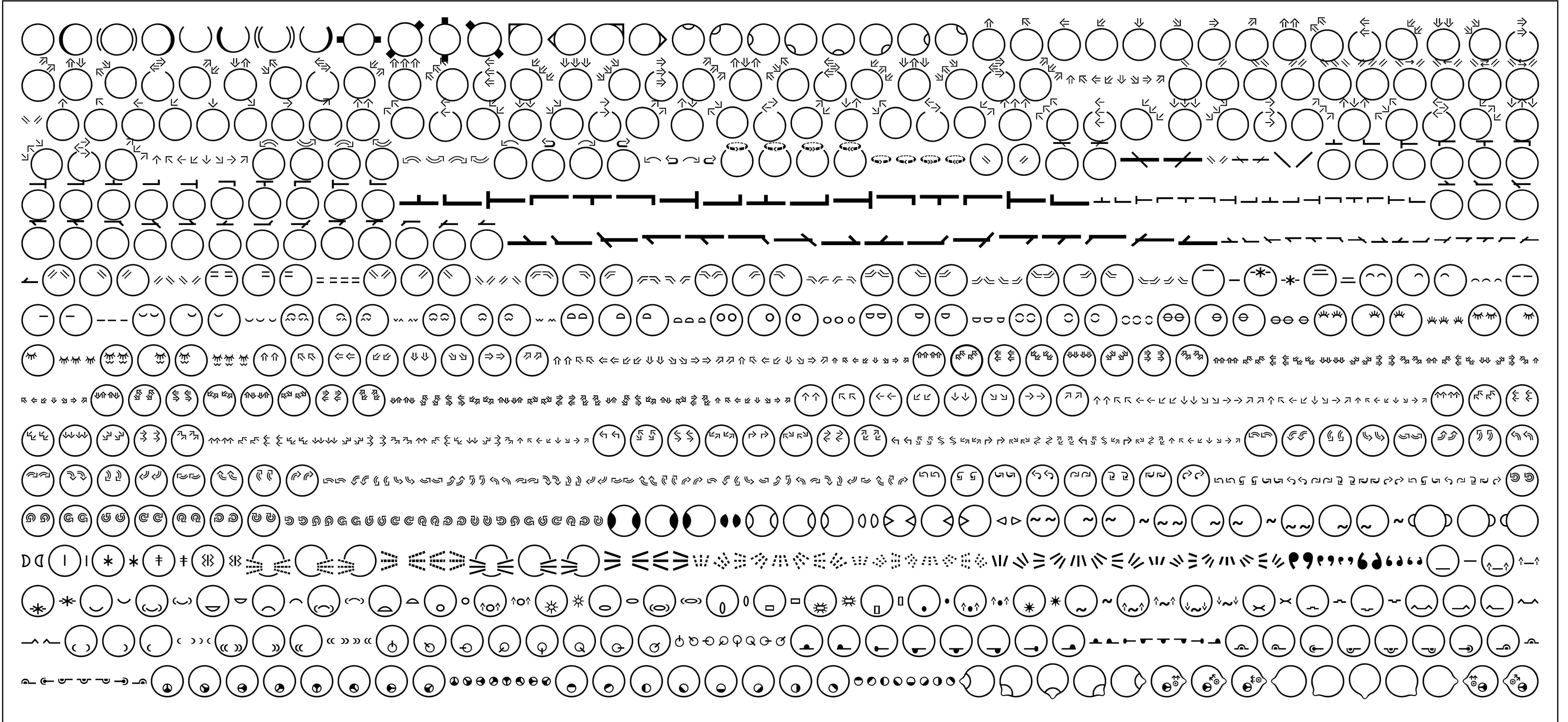




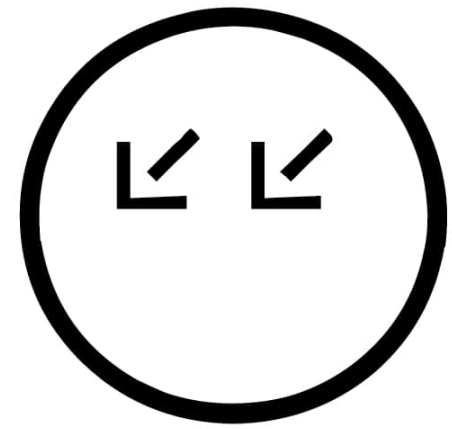


- I. LITERATURE REVIEW
- II. TYPANNOT'S APPROACH
- III. MOUTH ACTION SYSTEM
- IV. CONCEPTION / DESIGN
- V. TYPE ENGINEERING

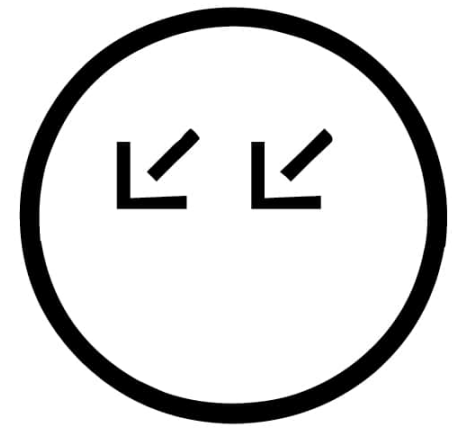
I. LITERATURE REVIEW



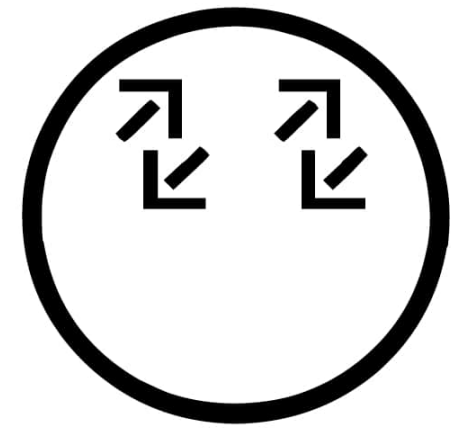
Extract from the SignWriting font
Valerie Sutton



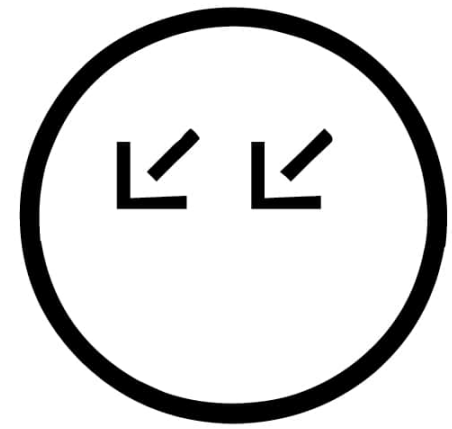
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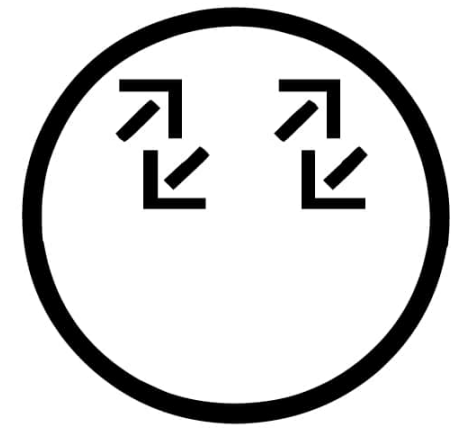
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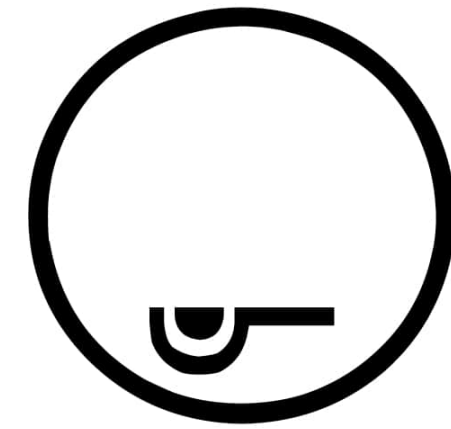
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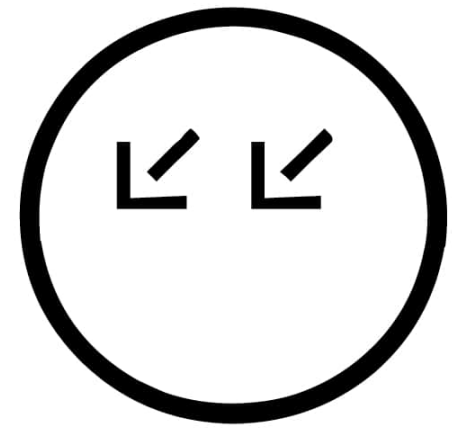
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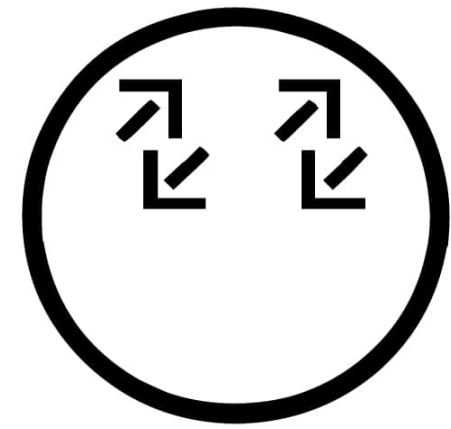
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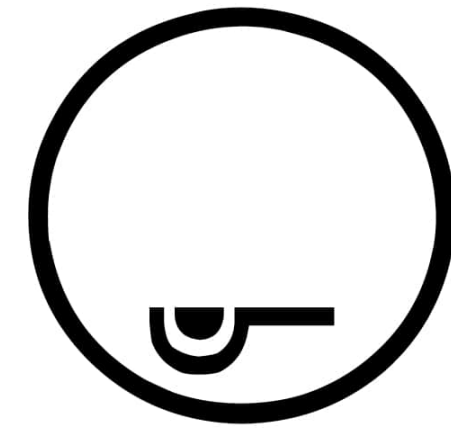
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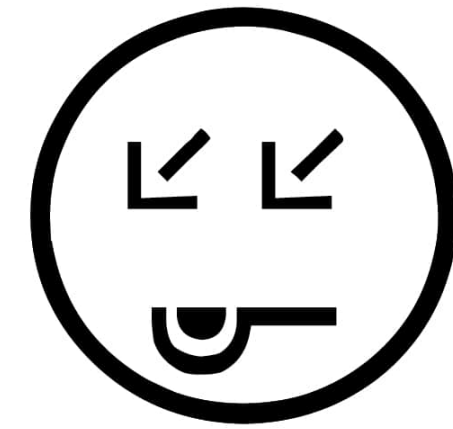
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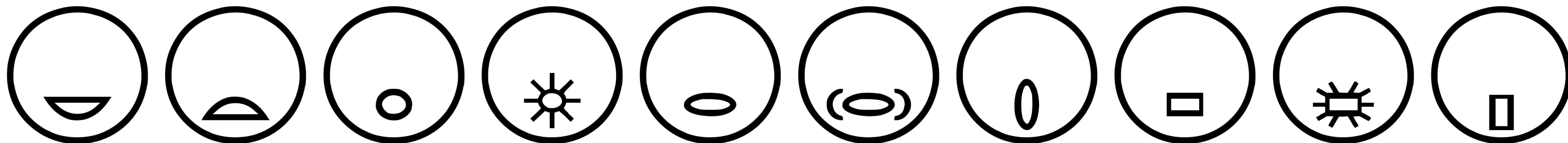
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C.

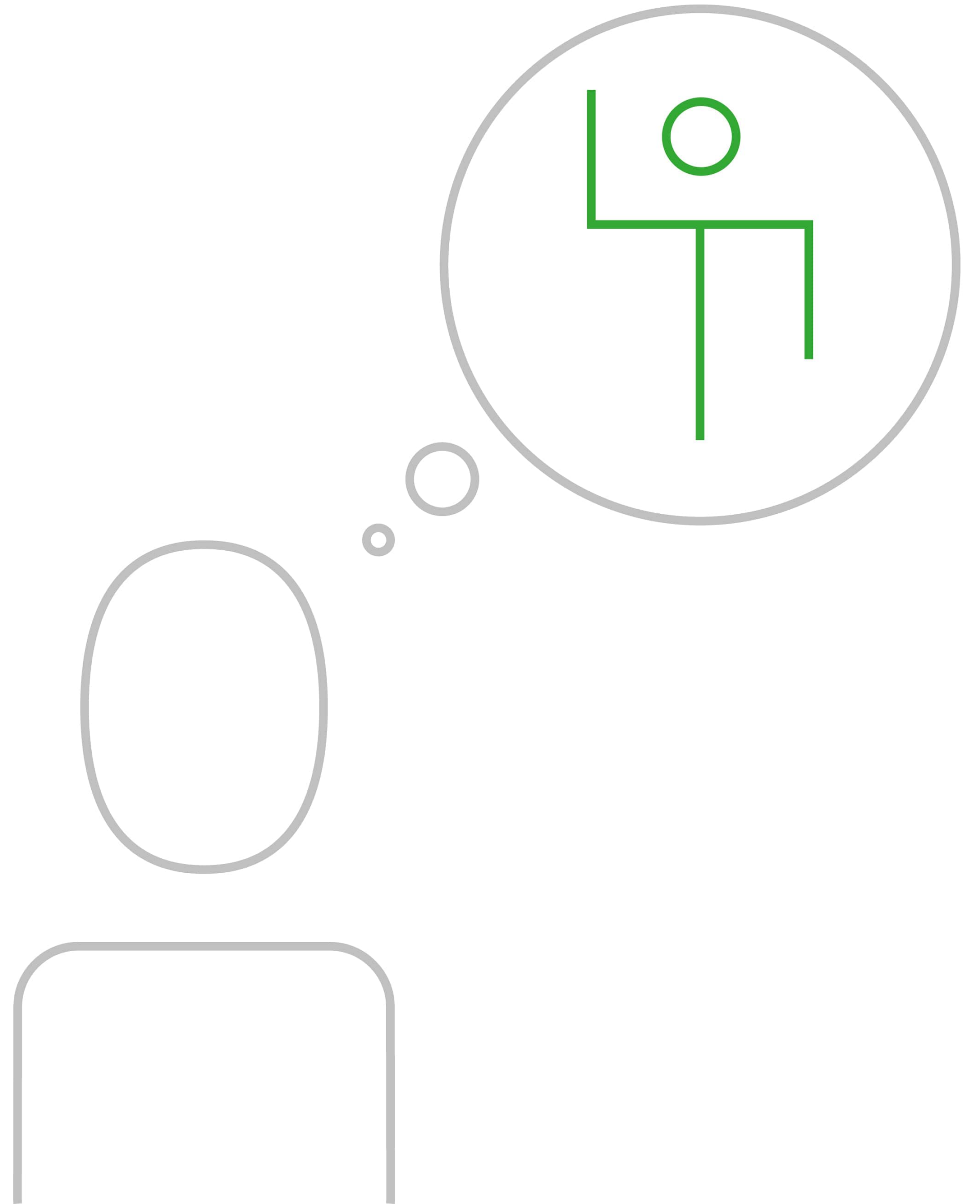
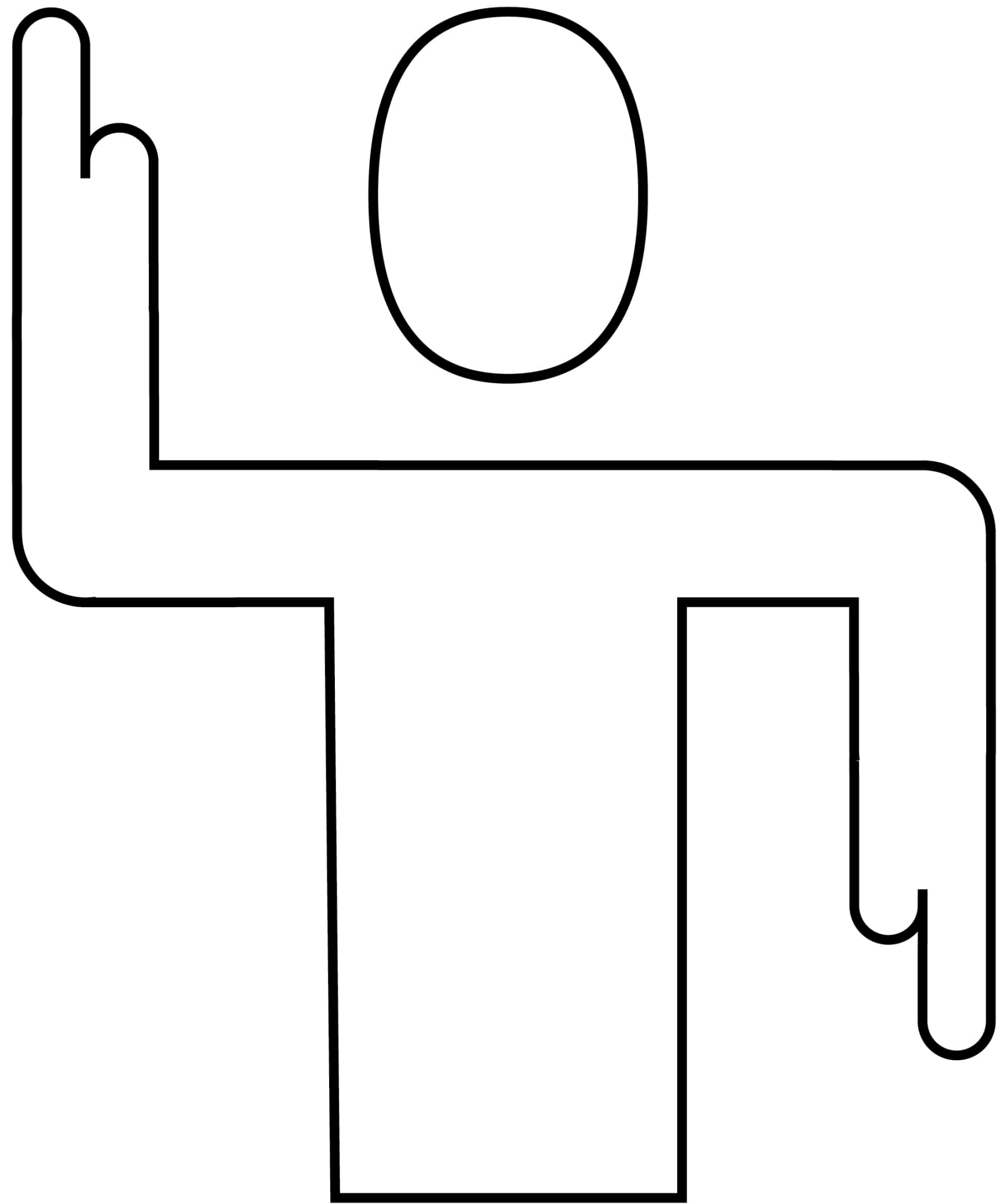


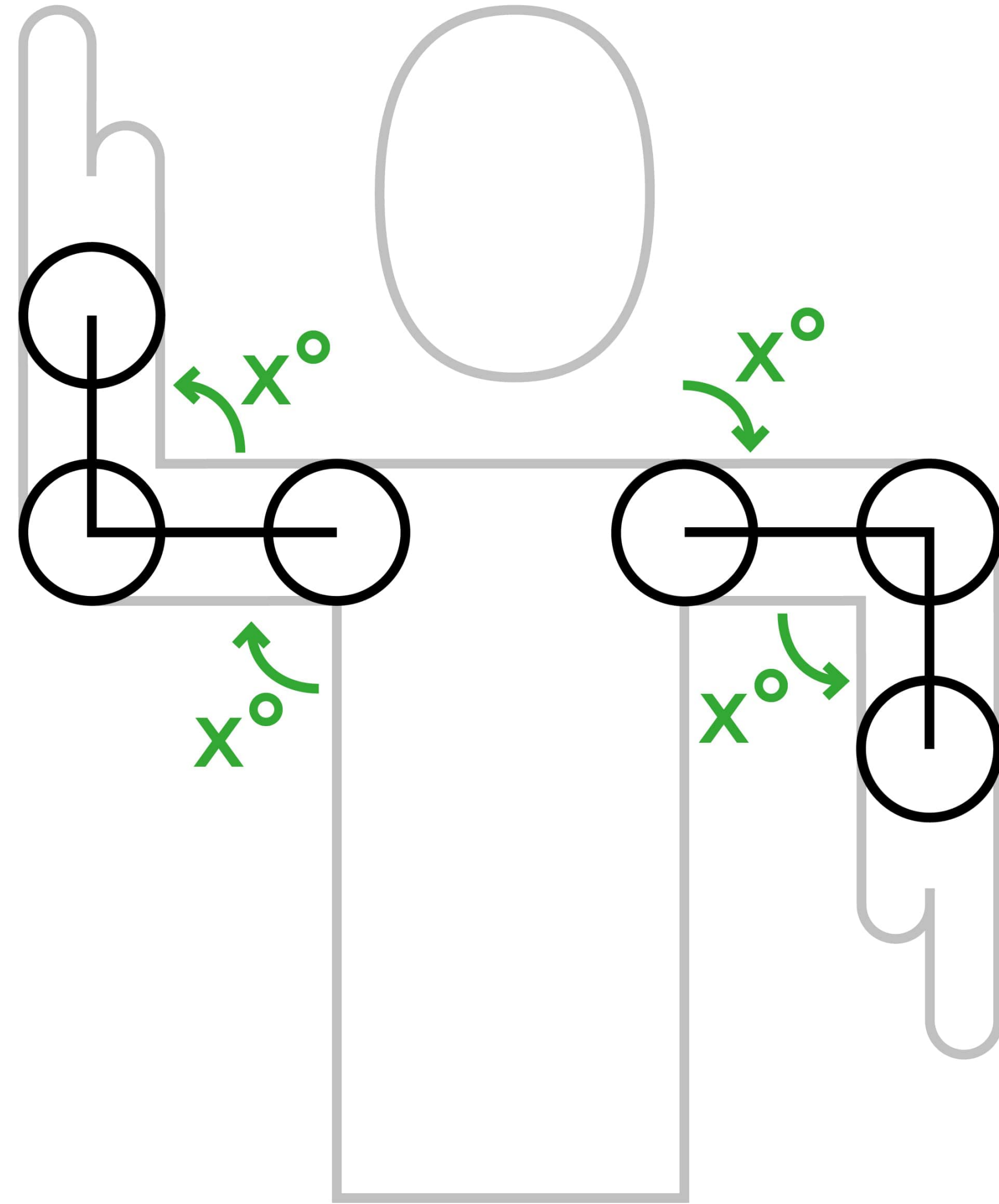
D.

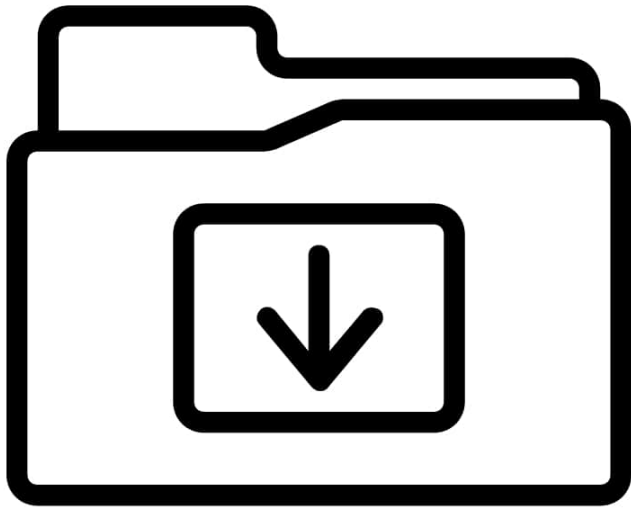


Extract from the SignWriting font
Valerie Sutton

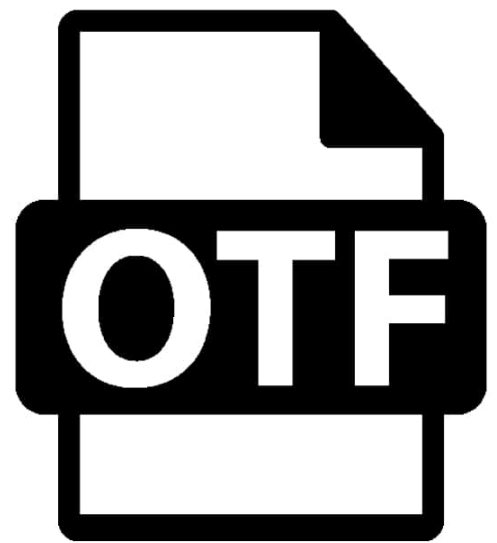
II. TYPANNOT'S APPROACH







TYPANNOT FONT FAMILY



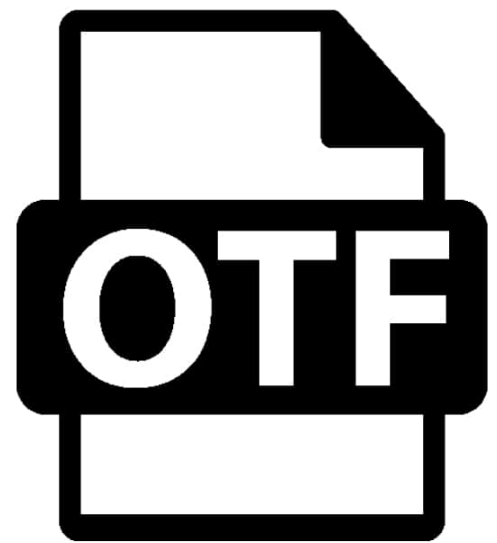
Handshape



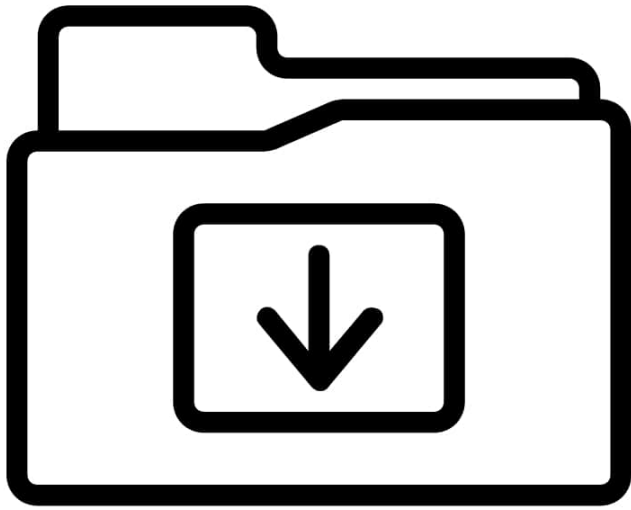
Localisation



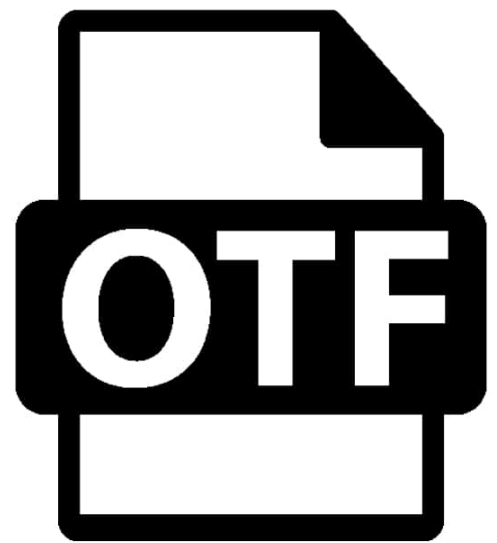
Mouth & Eye Actions



Movement



TYPANNOT FONT FAMILY



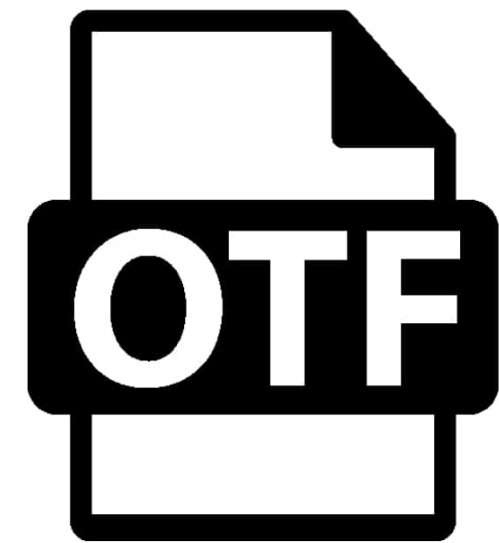
Handshape



Localisation



Mouth & Eye Actions



Movement



92%



75%



35% - 65%



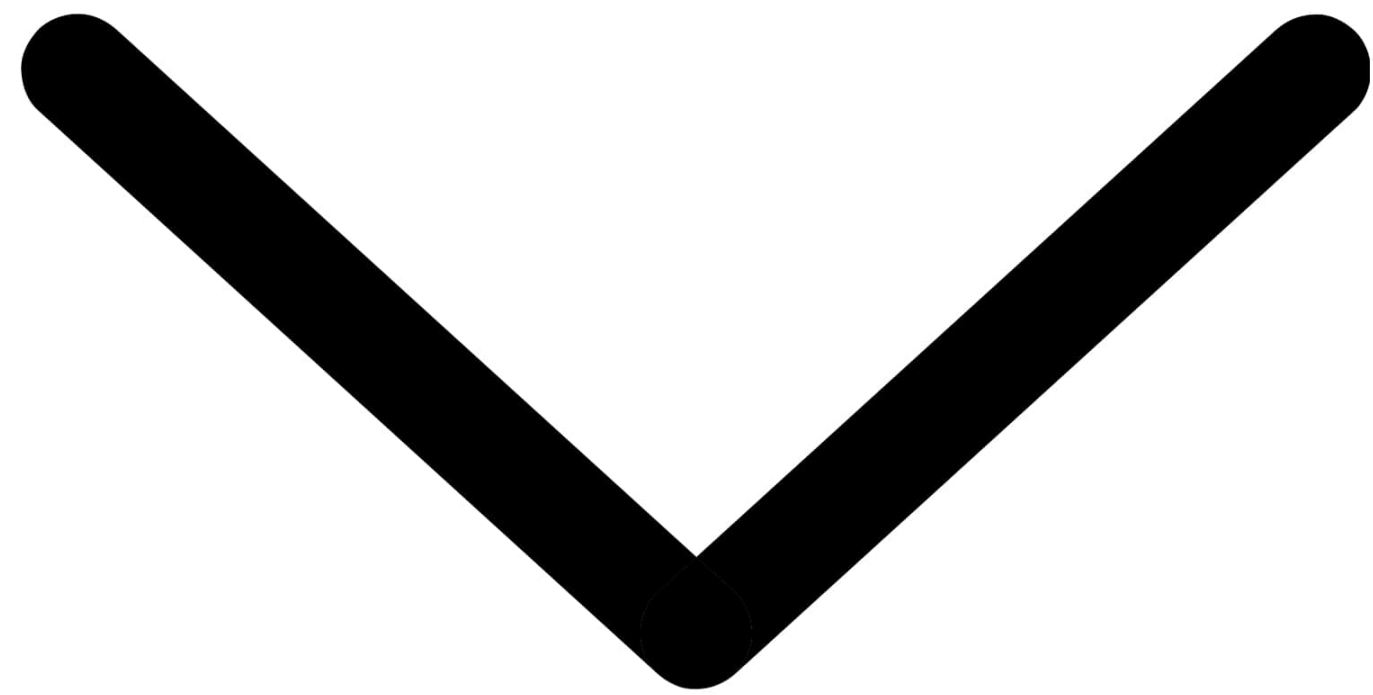
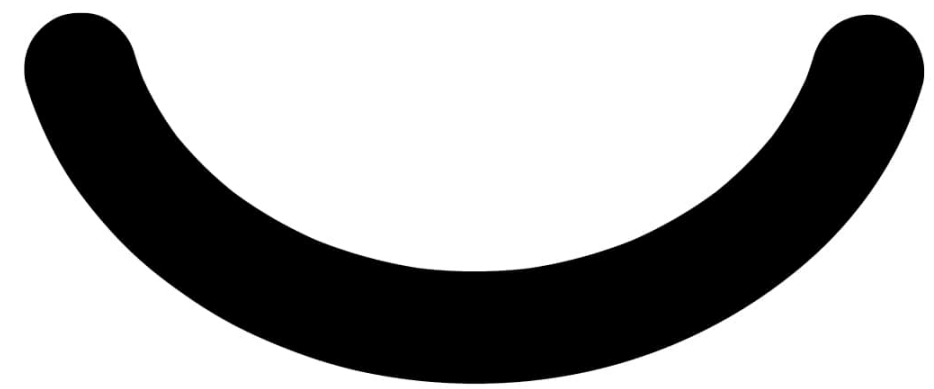
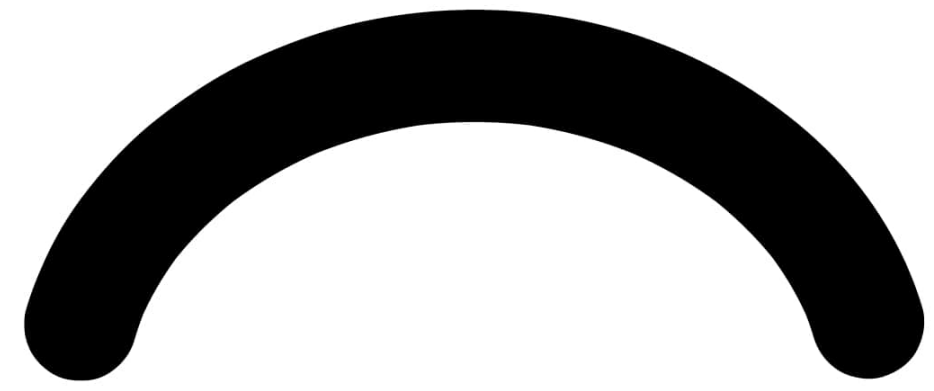
20%

III. MOUTH ACTION SYSTEM

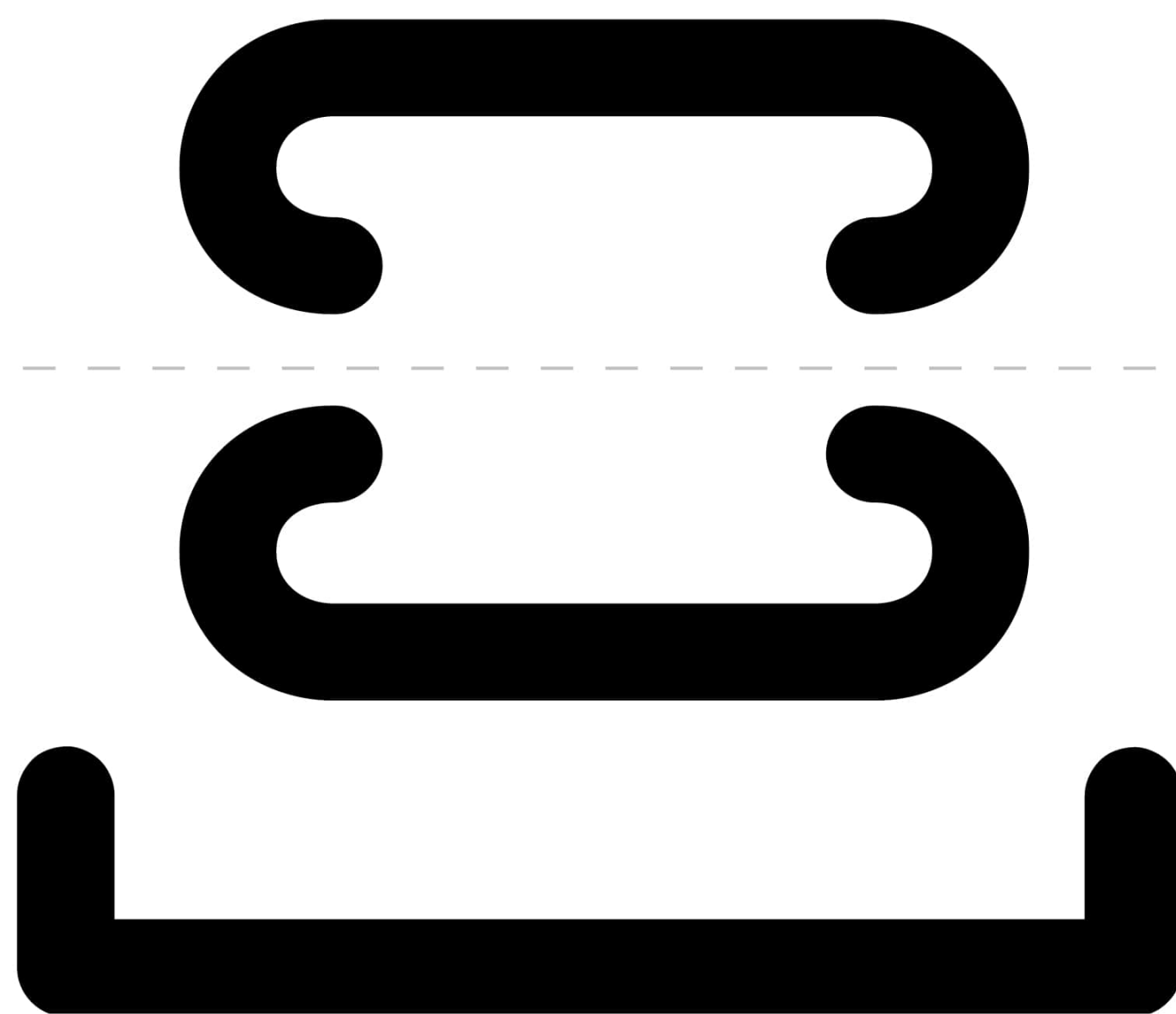




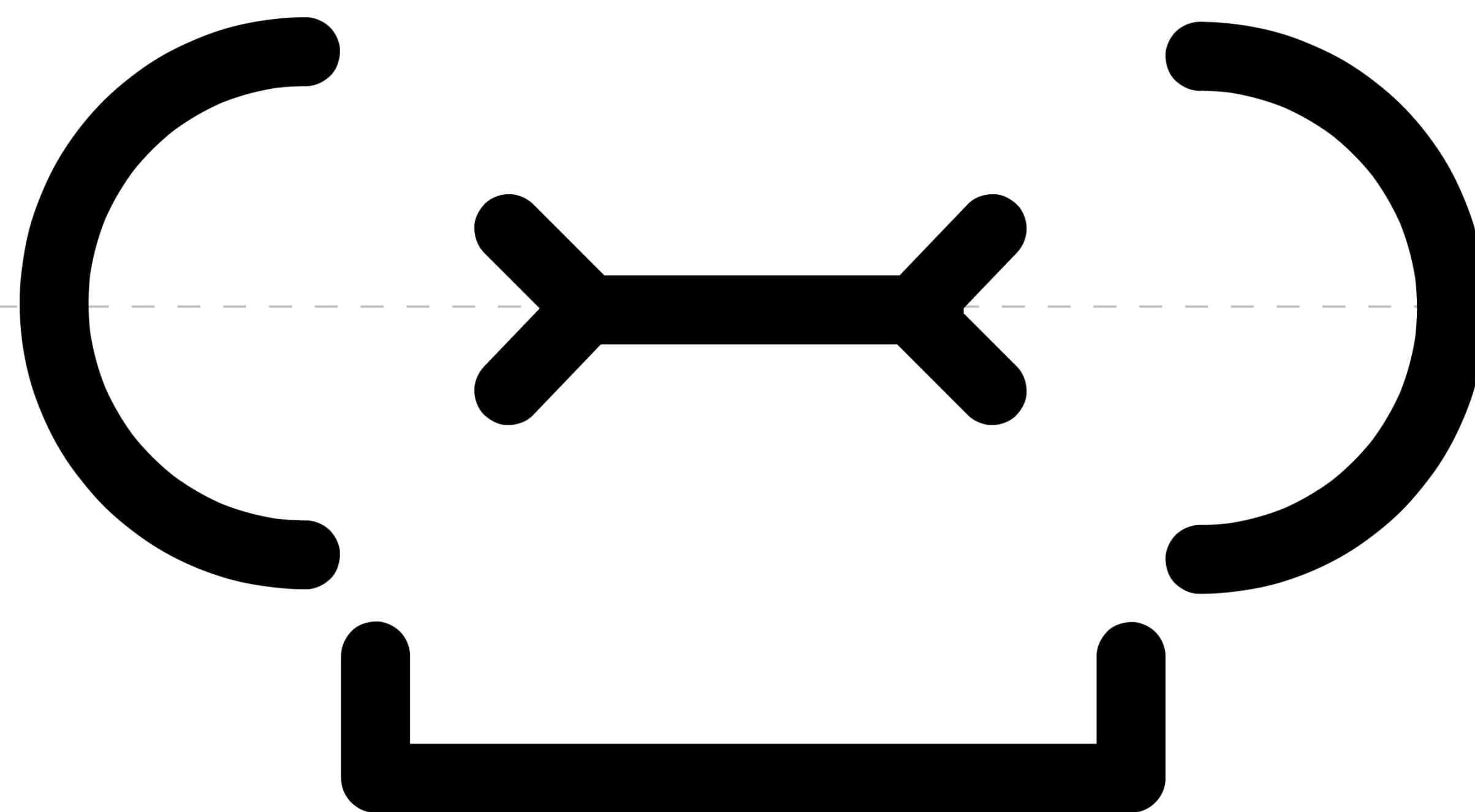




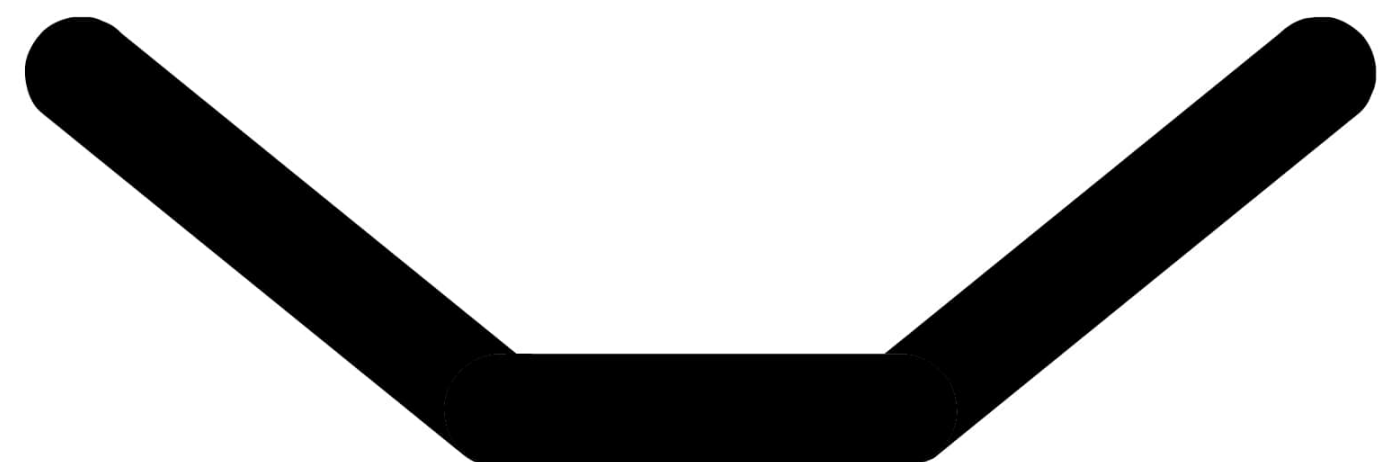


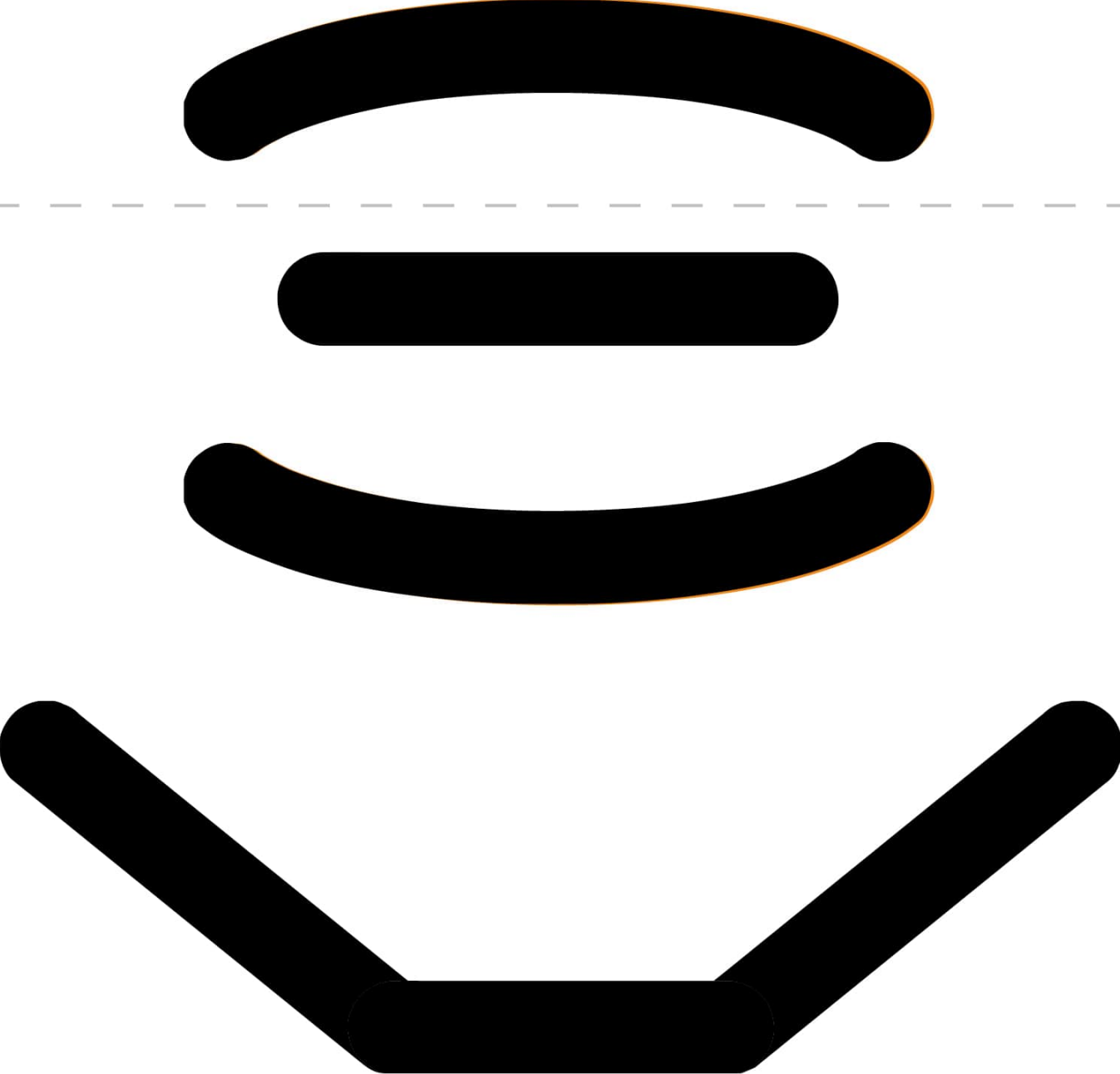


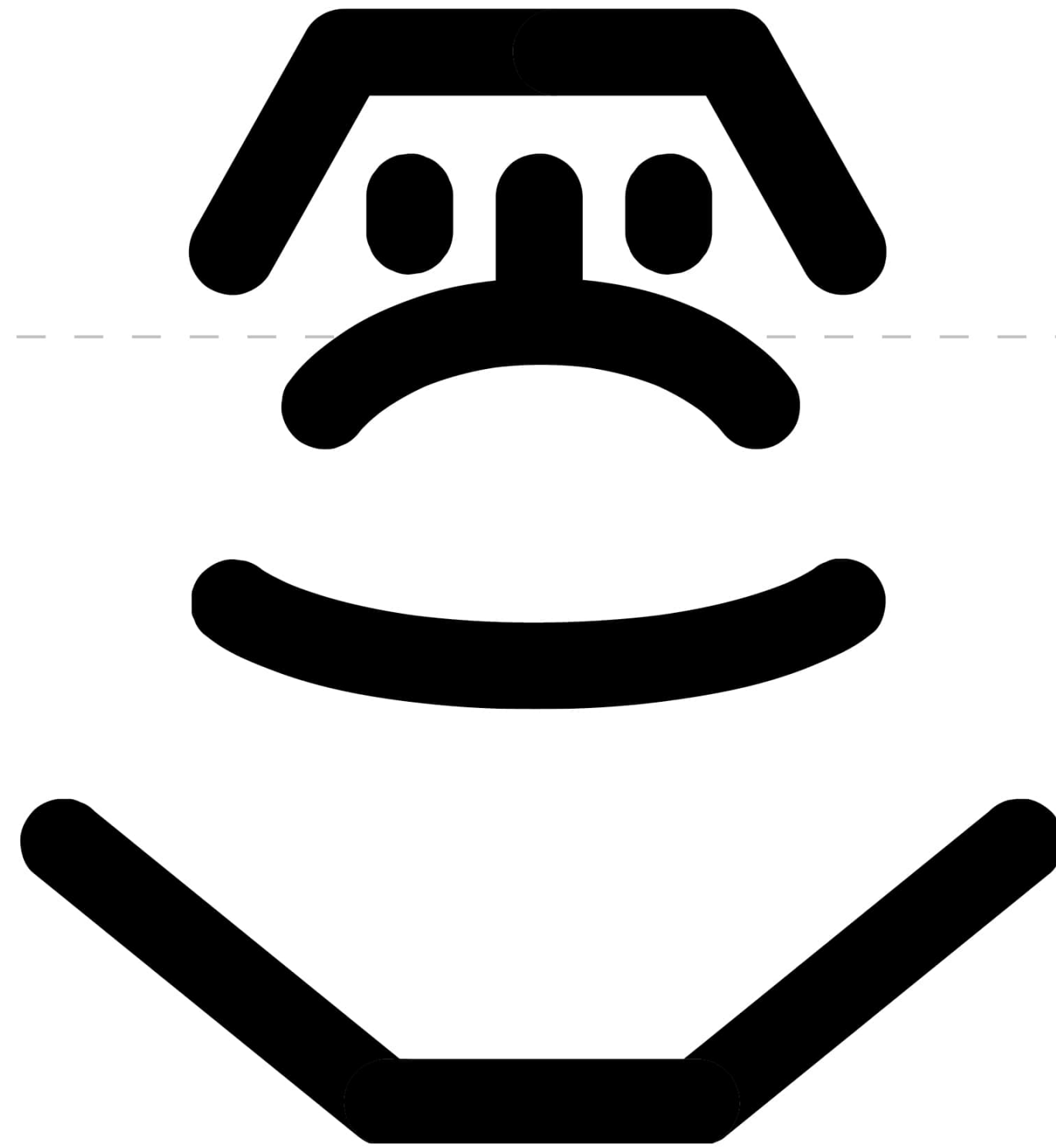










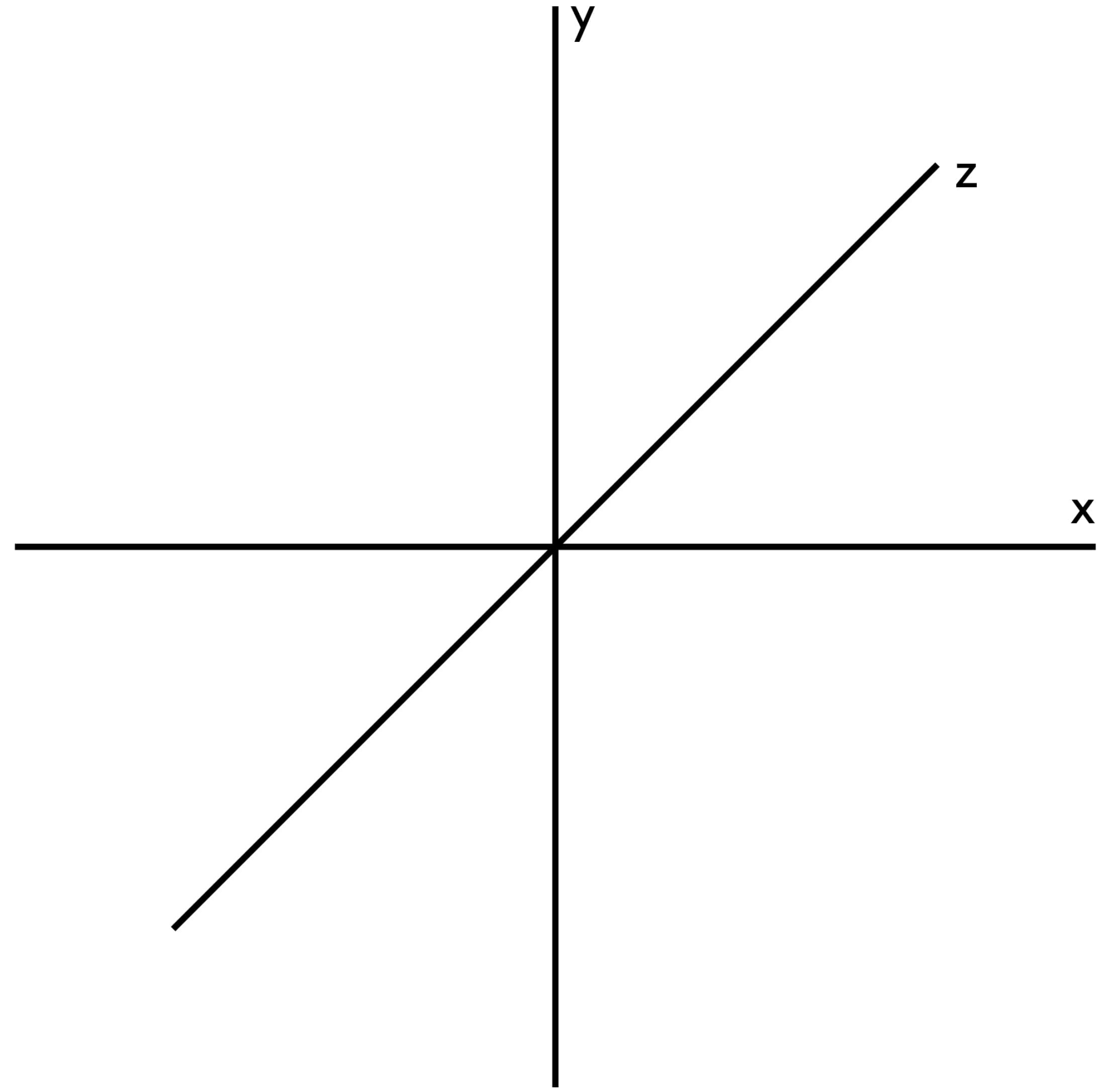
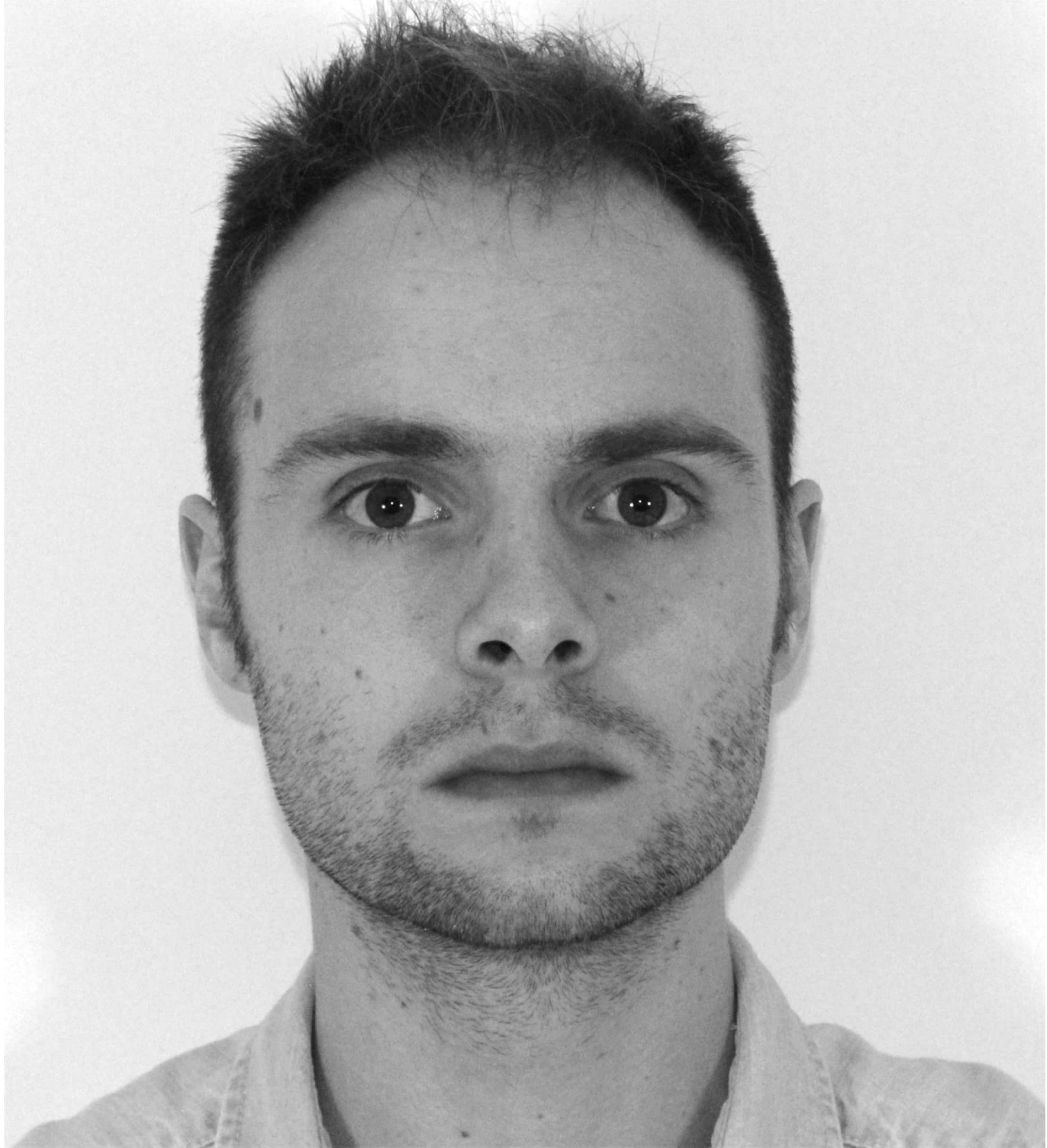


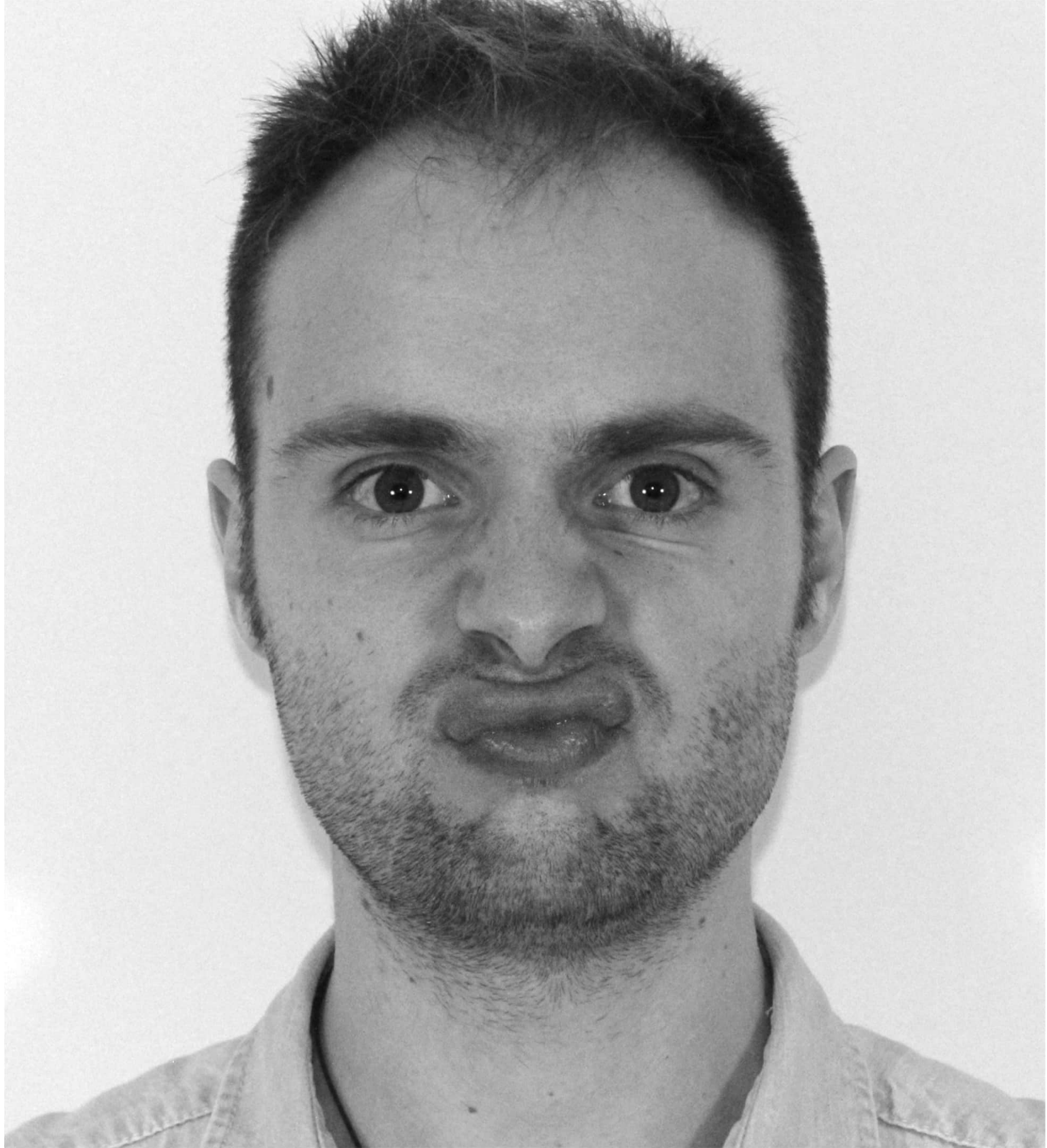
LIPS'S COMPONENTS /
JAW NEUTRAL

		Horizontal	Converge	Neutral	Diverge
		Vertical			
Neutral	Converge				
	Neutre				
	Diverge				
Fore	Neutre				
	Diverge				
Back	Neutre				

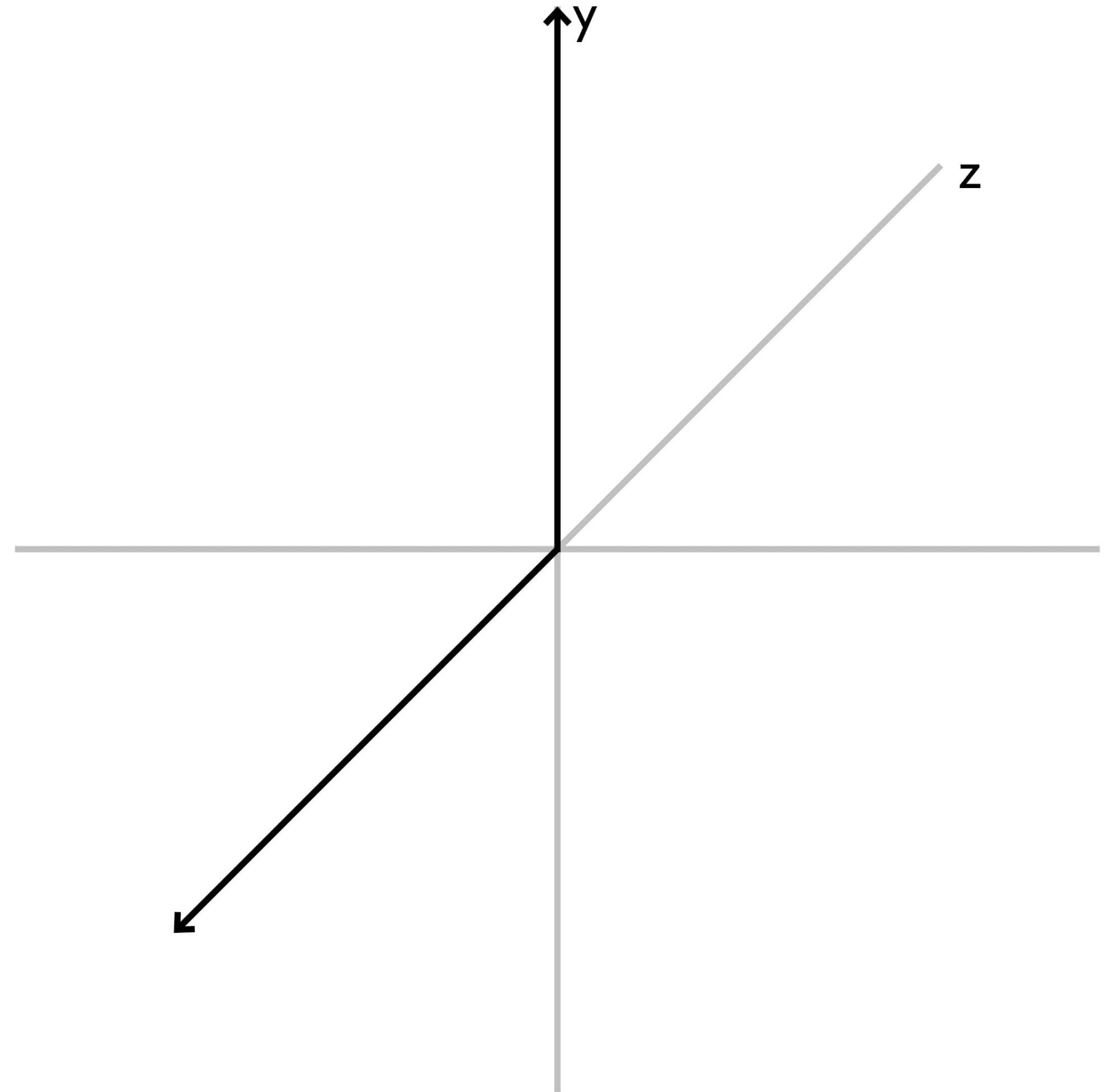
III. MOUTH ACTION SYSTEM

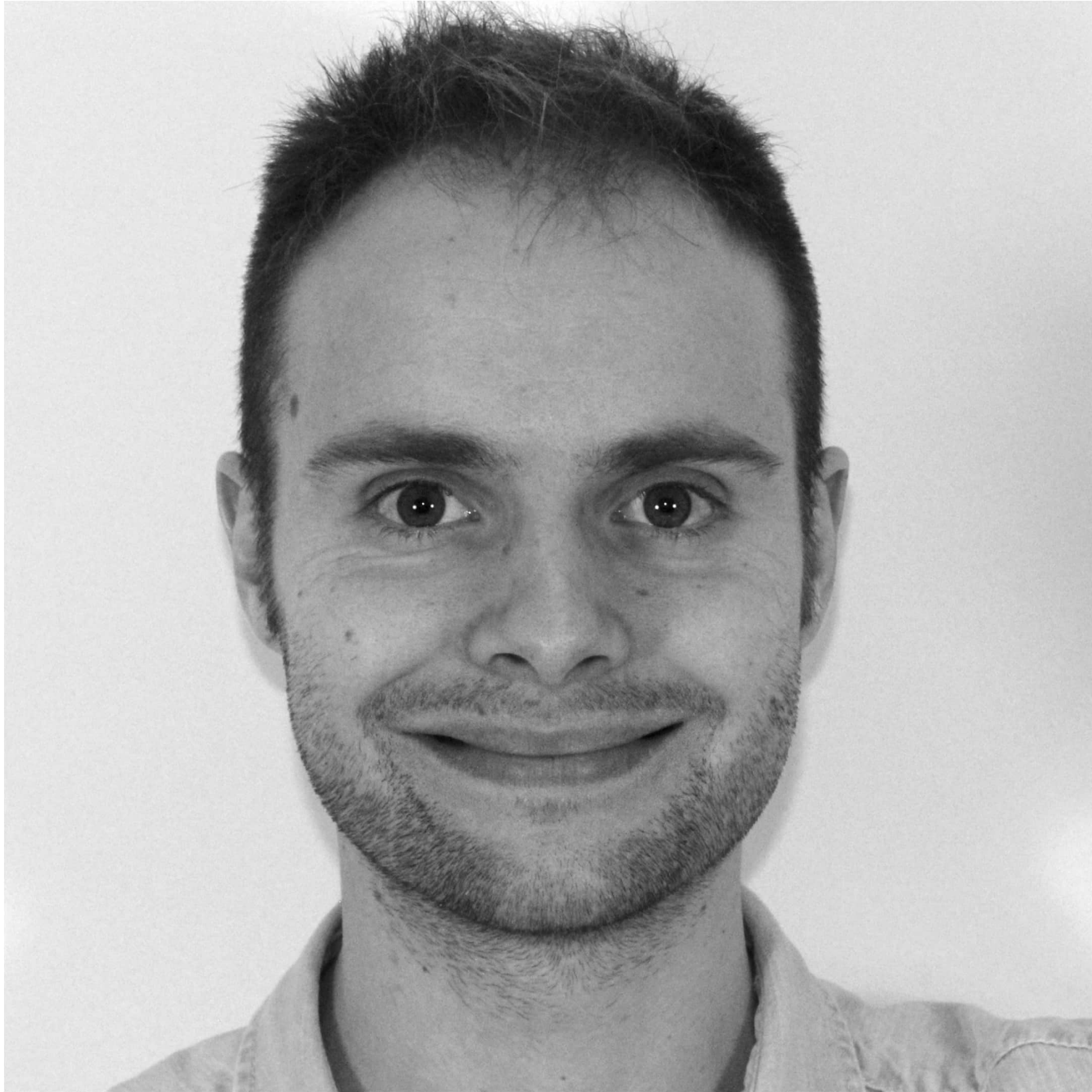
1. graphematic formula (characters)



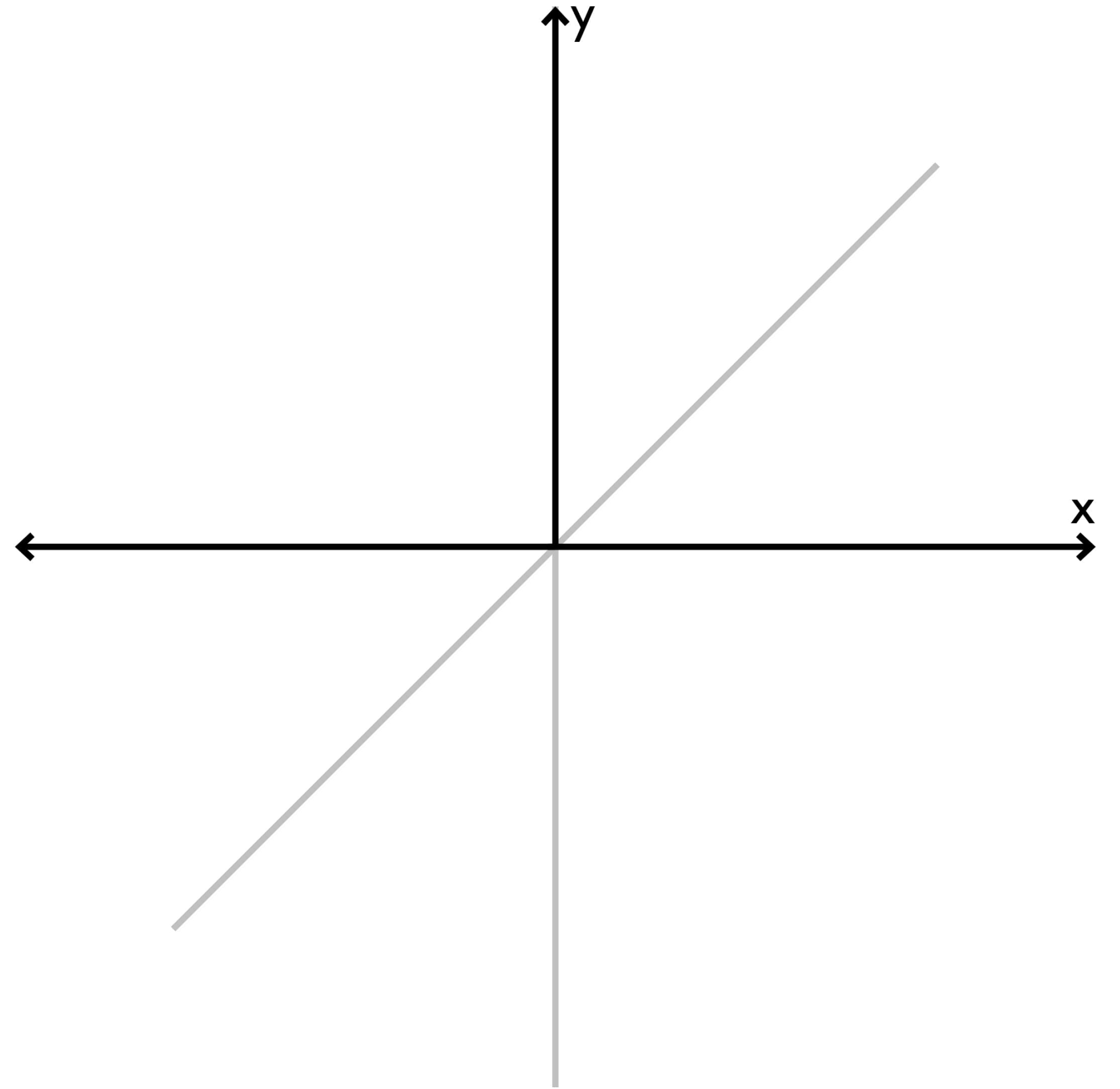


LIPS Fore Up



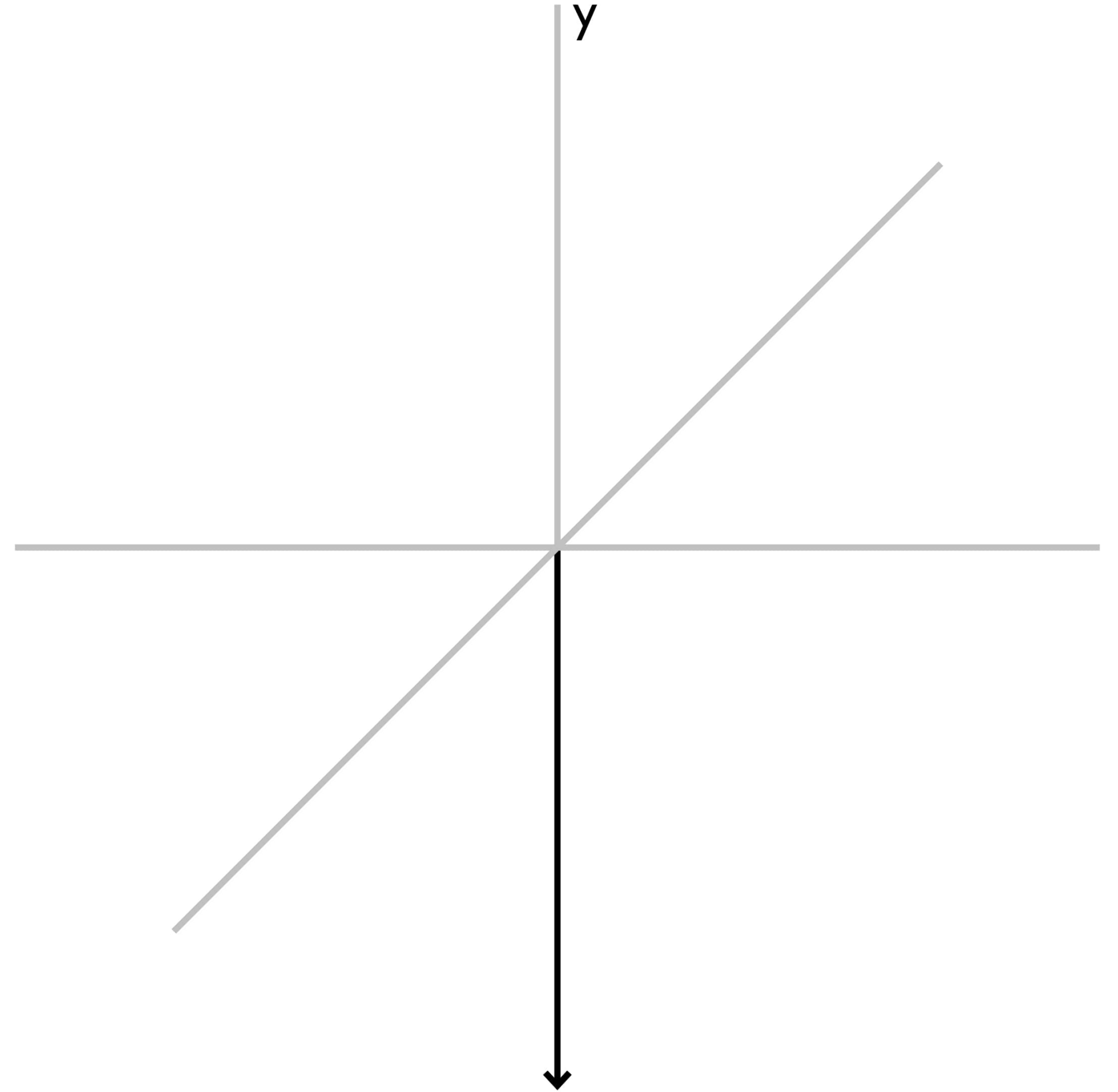


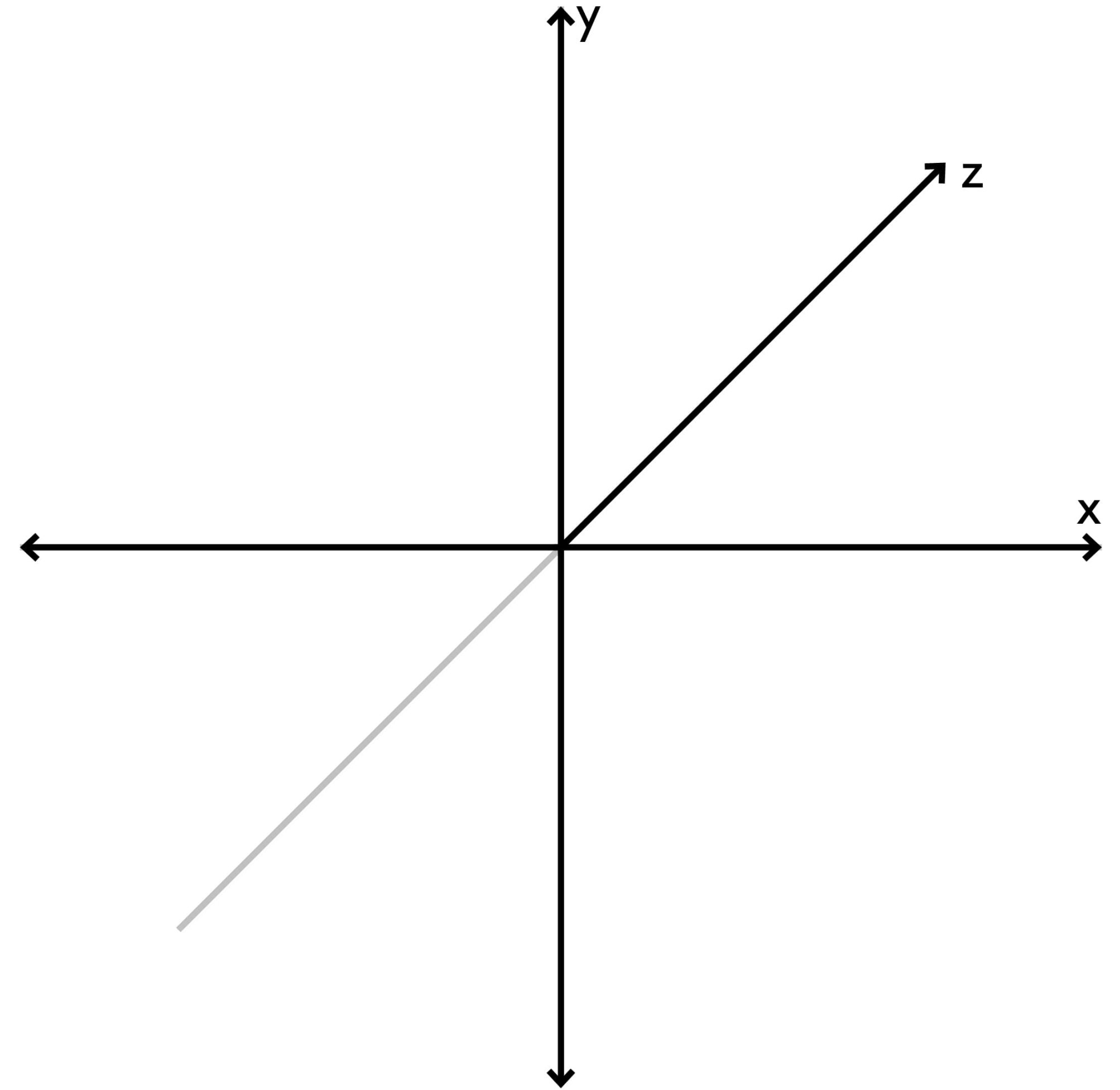
LIPS CORNERS Diverge Horizontal Up



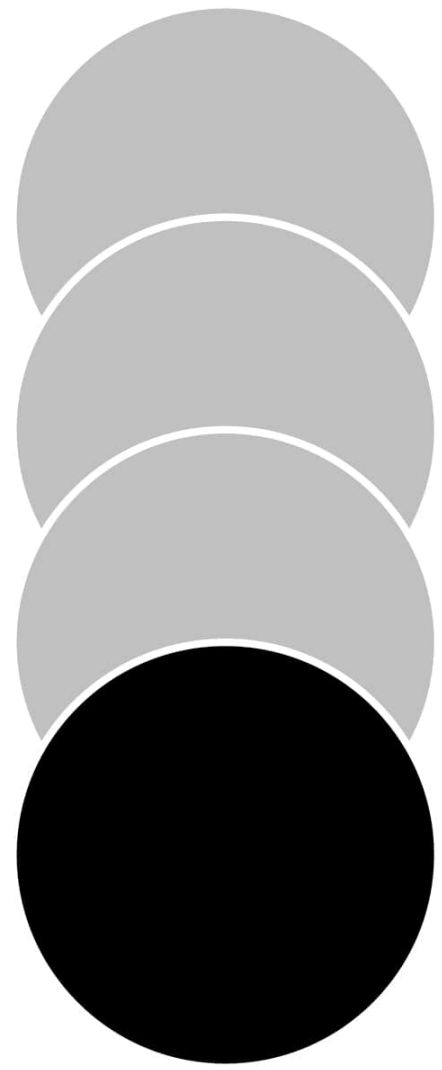


LIPS Diverge Vertical Max



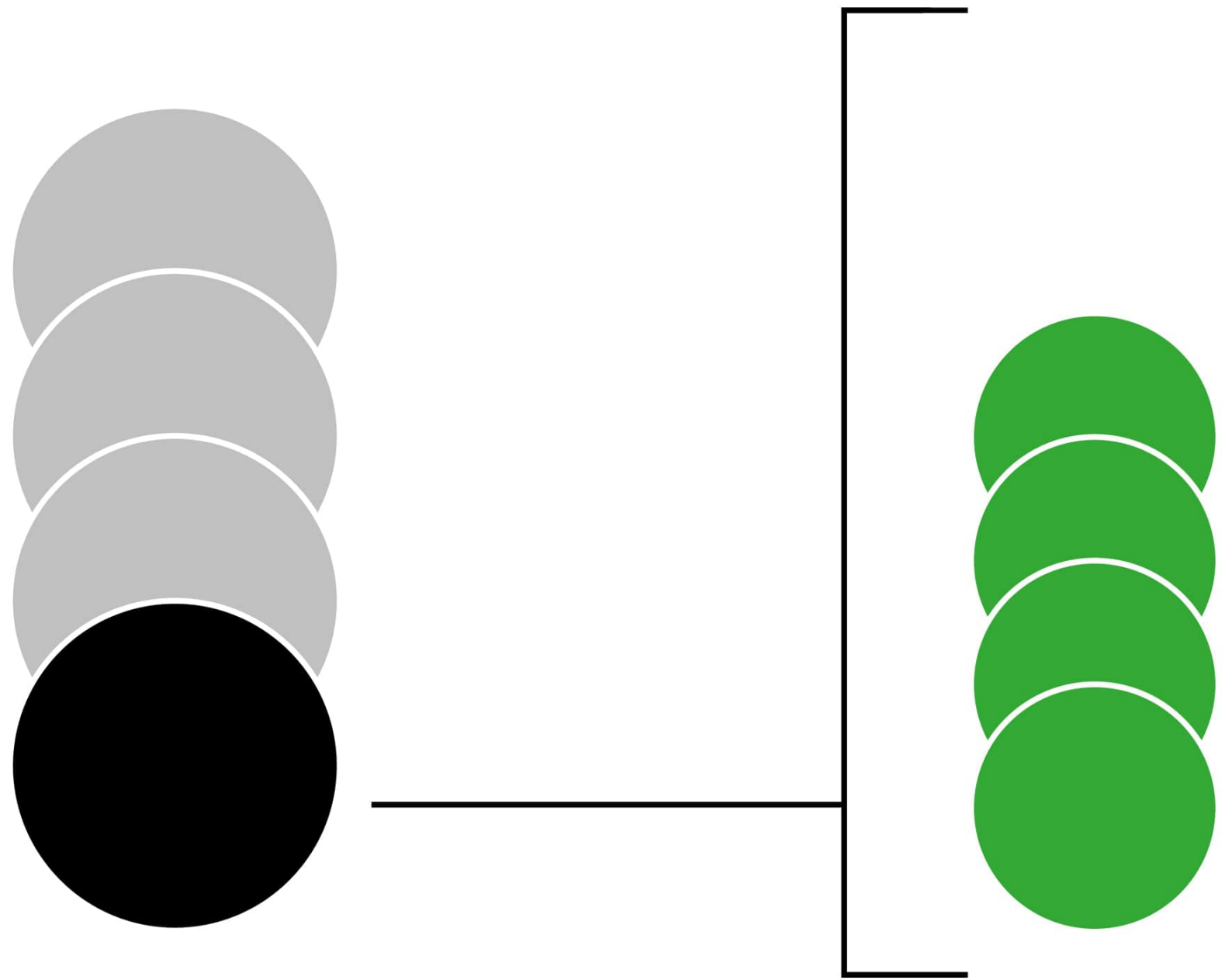


JAW Diverge Vertical Max, CORNER Diverge Horizontal, UPPER VERMILLON Up, LOWER VERMILLON Back



1. PARAMETER

- Handshape
- Upper limbs position
- **Mouth Actions**
- Movement

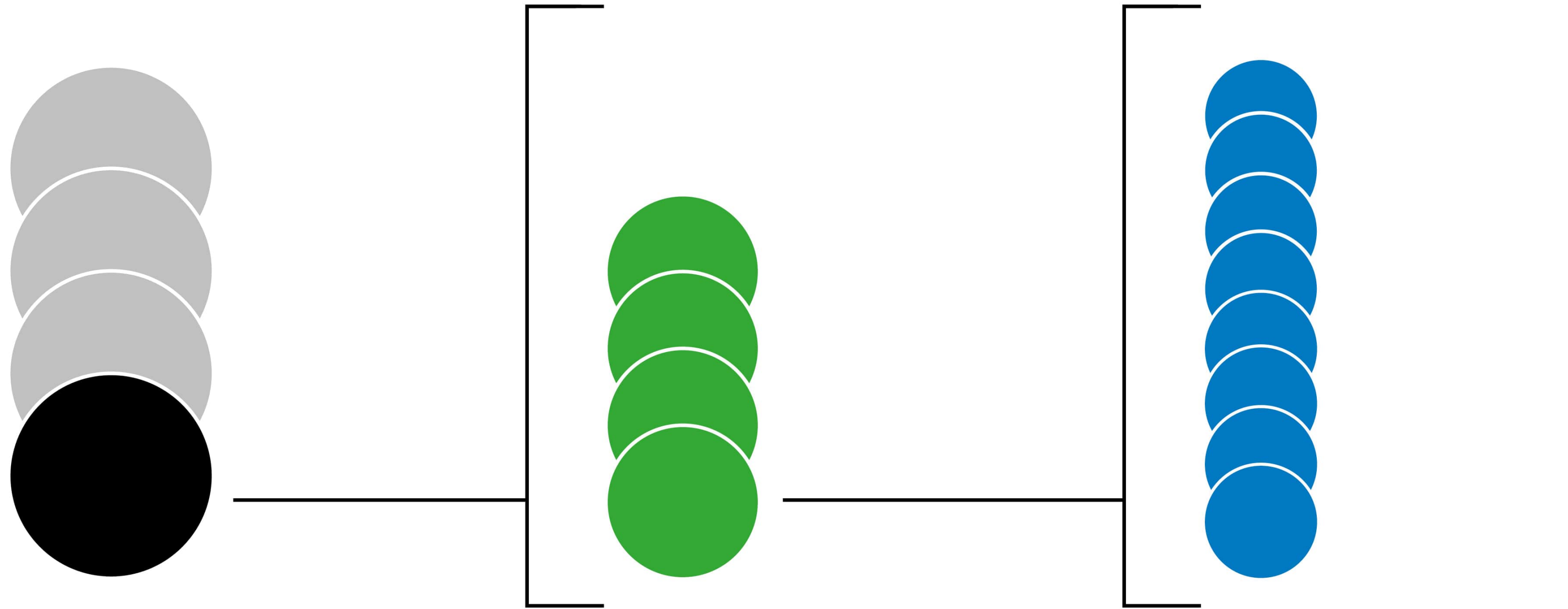


1. PARAMETER

- Handshape
- Upper limbs position
- **Mouth Actions**
- Movement

2. PARTS (x4)

- **Jaw**
- **Lips (corners, vermillion)**
- **Tongue**
- **Air**



1. PARAMETER

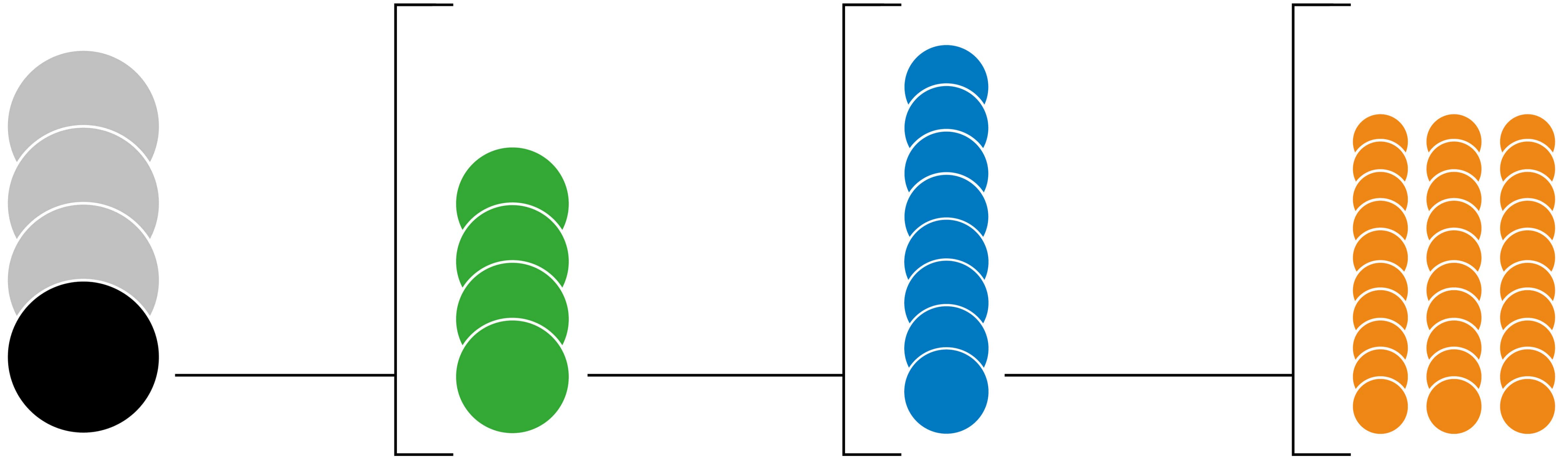
- Handshape
- Upper limbs position
- **Mouth Actions**
- Movement

2. PARTS (x4)

- **Jaw**
- **Lips (corners, vermilion)**
- **Tongue**
- **Air**

3. VARIABLES (x8)

- **Vergence**
- **Contact**
- **Selection**
- **Position**
- **Shape**
- **Channel**
- **Stream**



1. PARAMETER

- Handshape
- Upper limbs position
- Mouth Actions
- Movement

2. PARTS (x4)

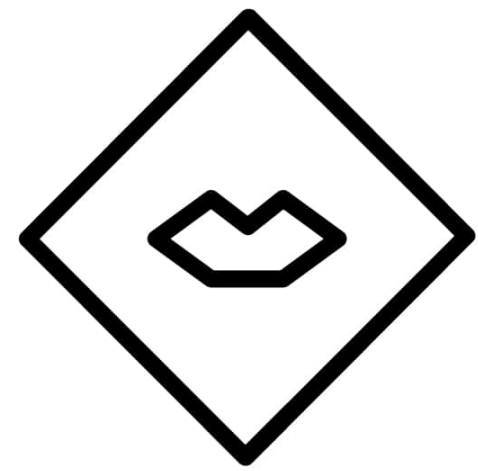
- Jaw
- Lips (corners, vermilion)
- Tongue
- Air

3. VARIABLES (x8)

- Vergence
- Contact
- Selection
- Position
- Shape
- Channel
- Stream

4. VALUES (x30)

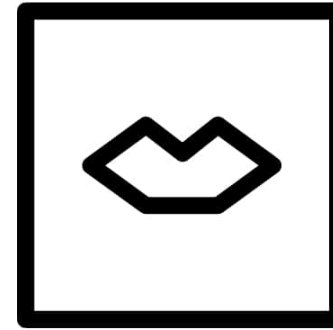
- Diverge
- Converge
- Up
- Down
- Fore
- Back
- Left
- Right
- ...



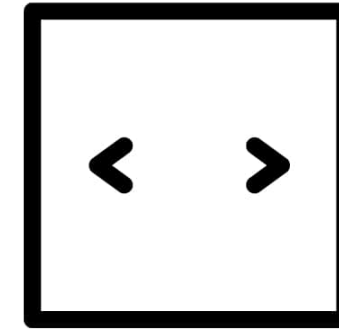
Mouth Action



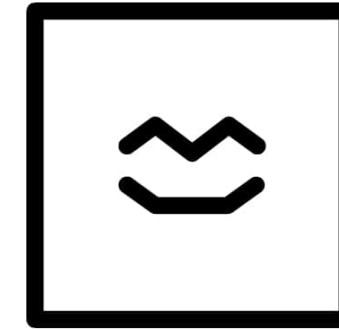
Jaw



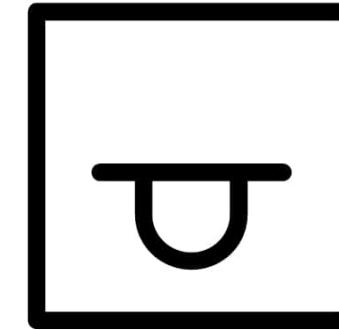
Lips



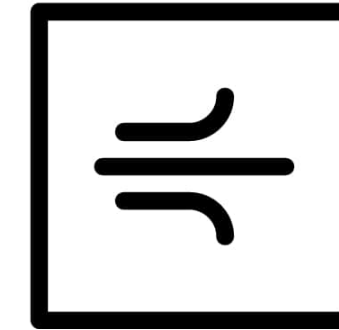
Corners



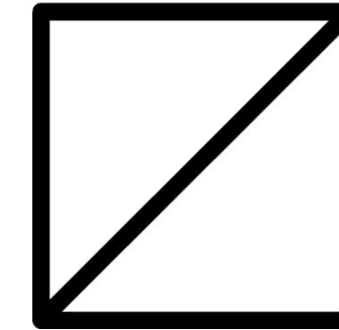
Vermillon



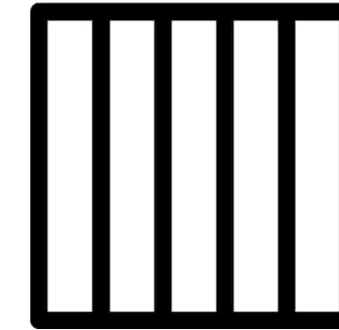
Tongue



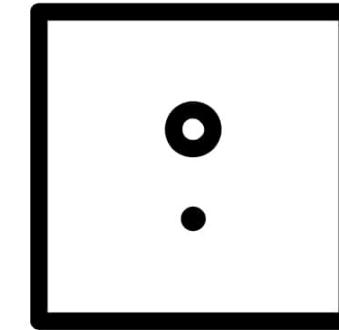
Air



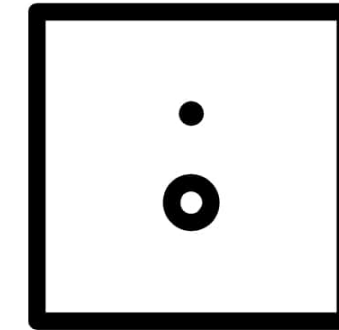
None



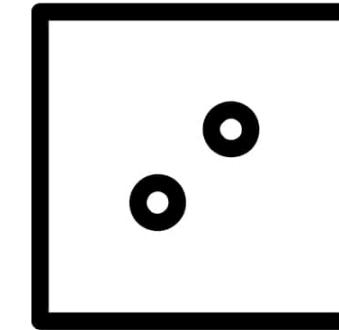
Hidden



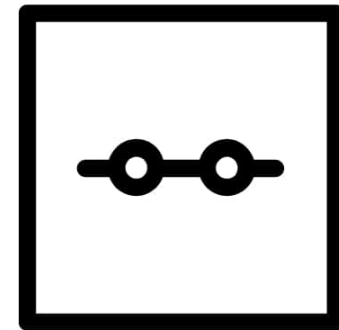
Upper Selection



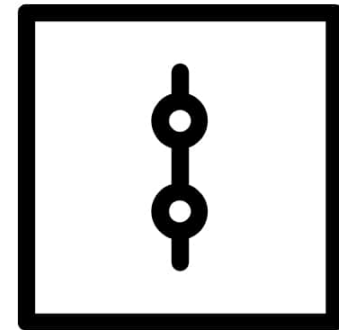
Lower Selection



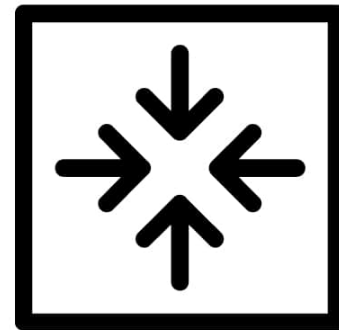
Both Selection



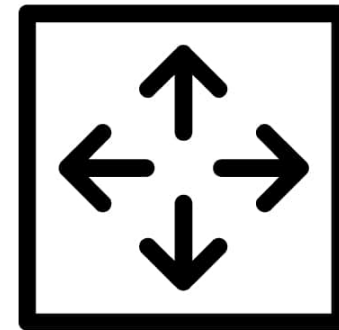
Horizontal



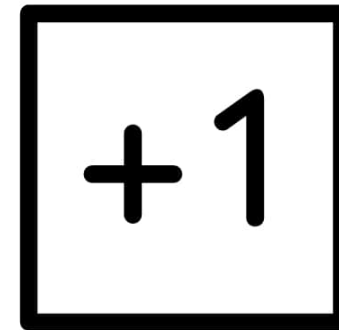
Vertical



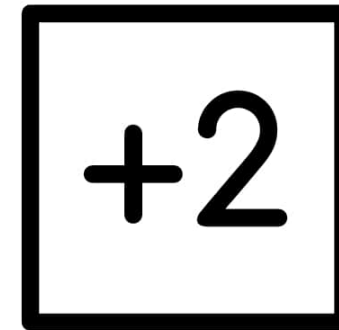
Converge



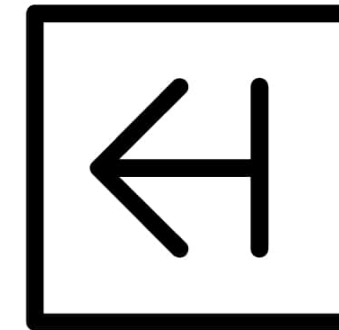
Diverge



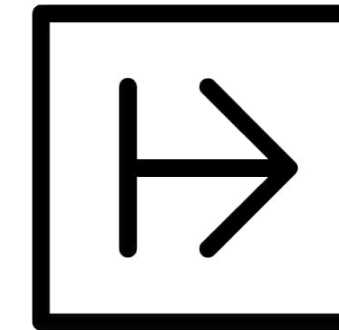
Plus One



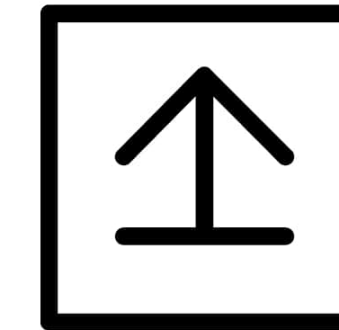
Plus Two



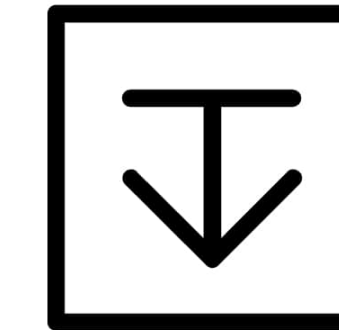
Left



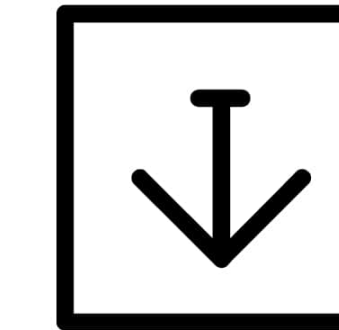
Right



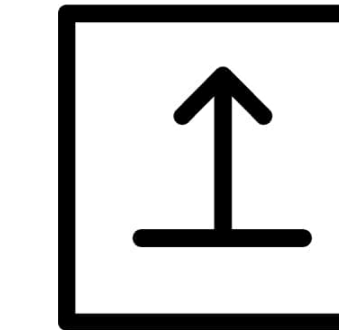
Up



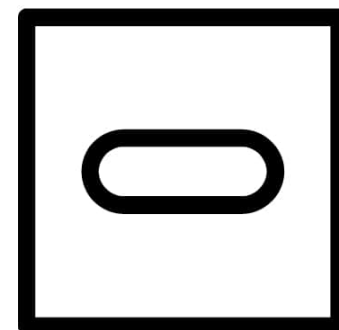
Down



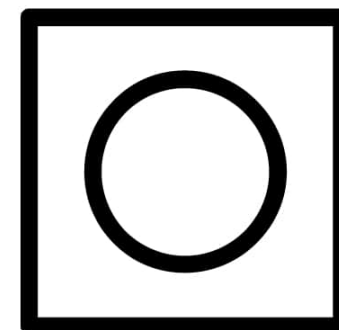
Fore



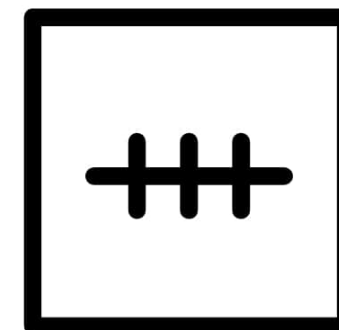
Back



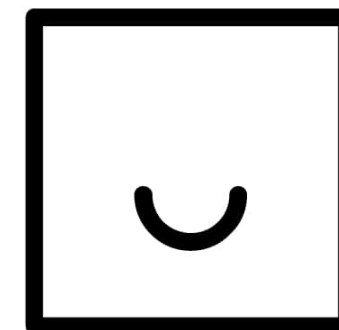
Flat



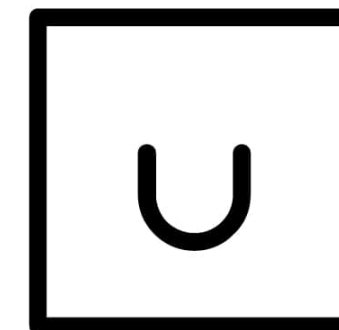
Round



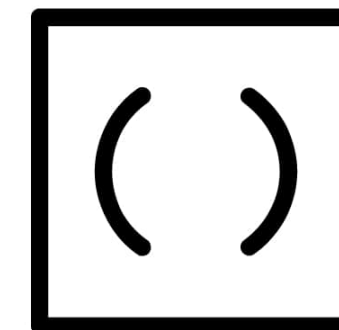
Teeth



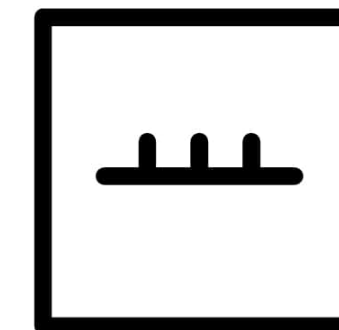
Tip



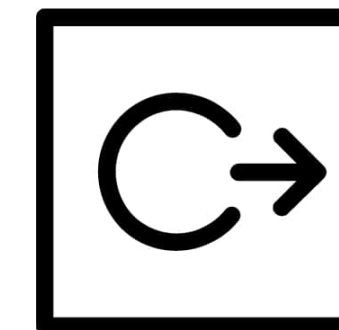
Blade



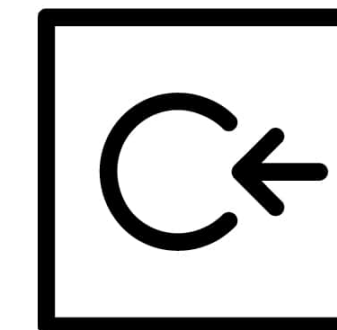
Cheeks



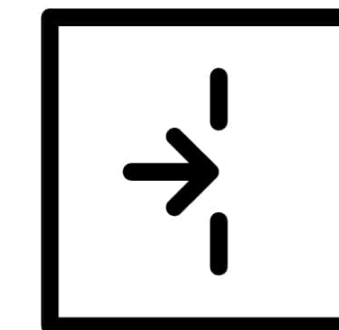
Dental Arc



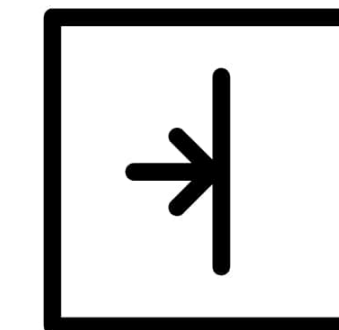
Out



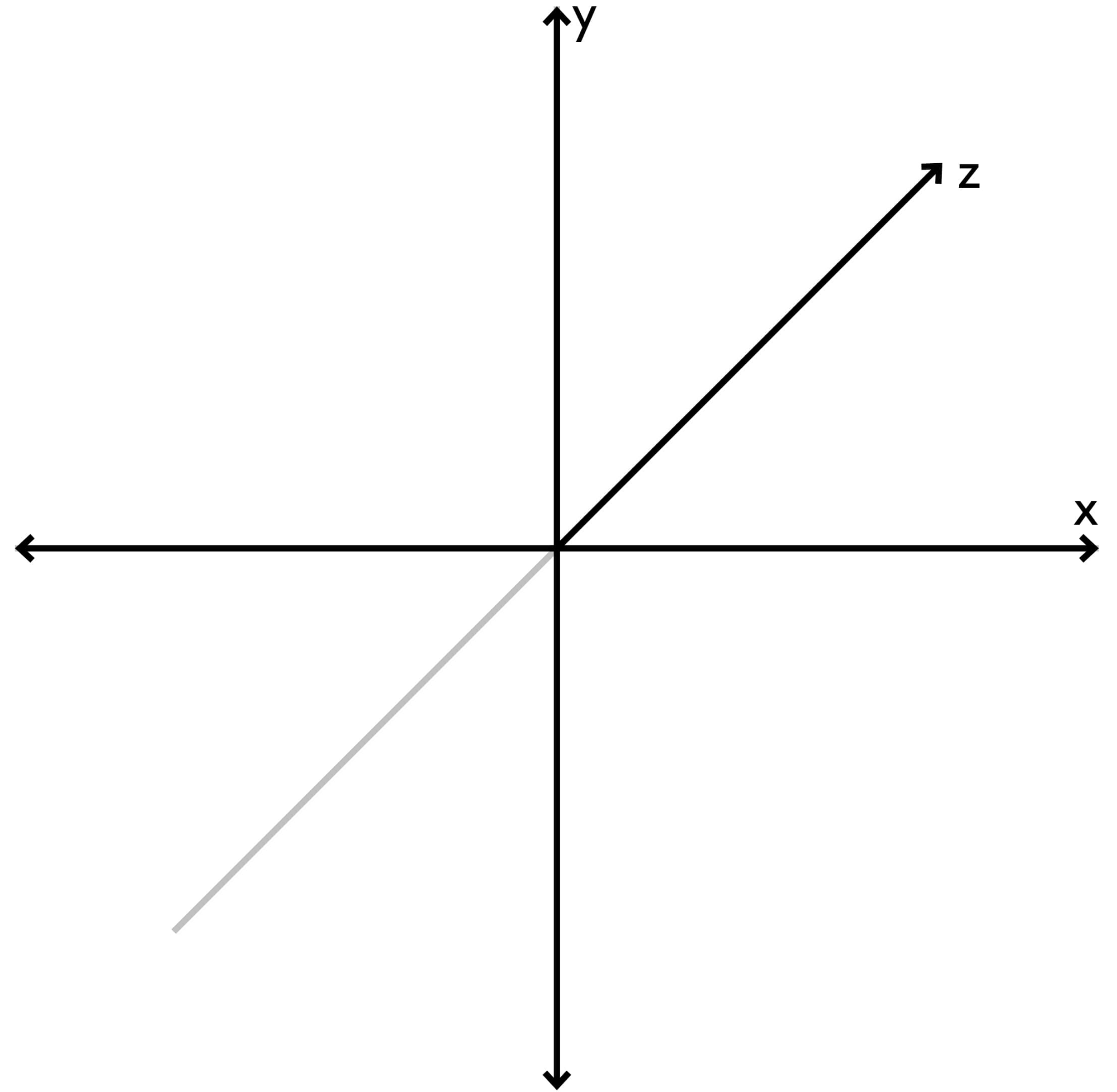
In



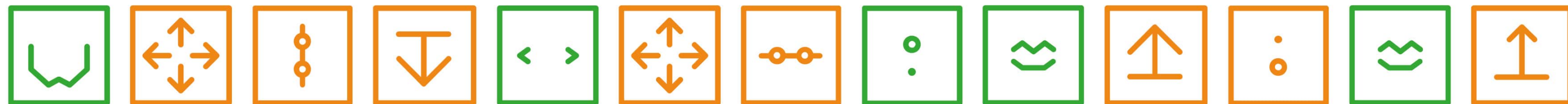
Restricted



Obstructed

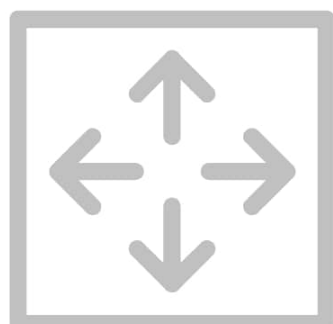
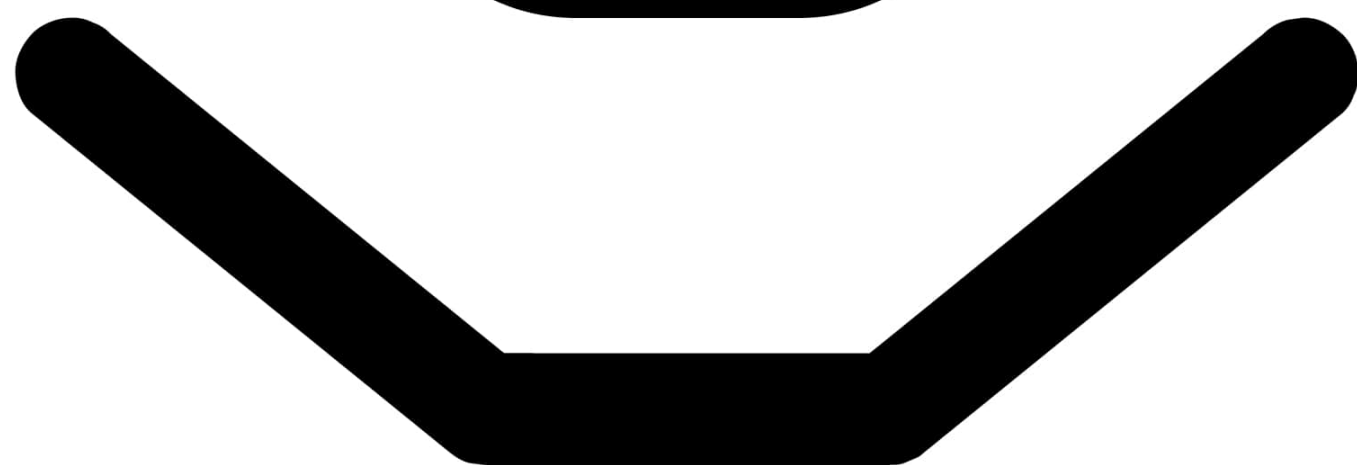
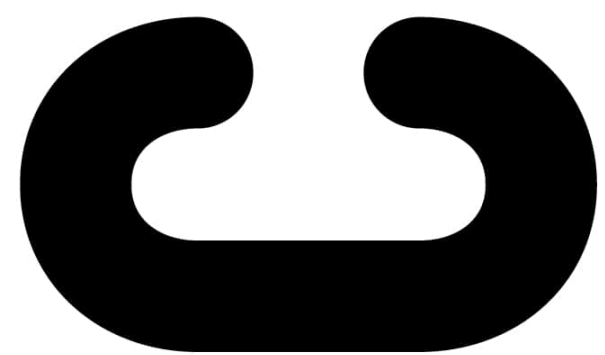
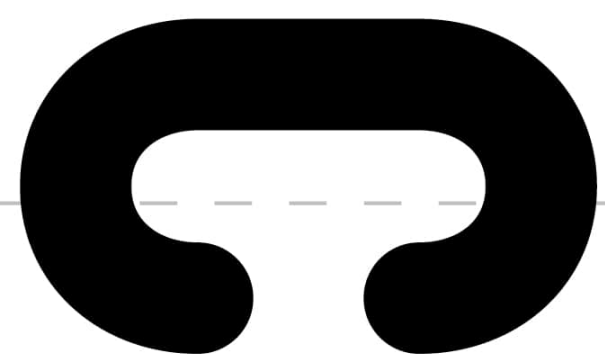


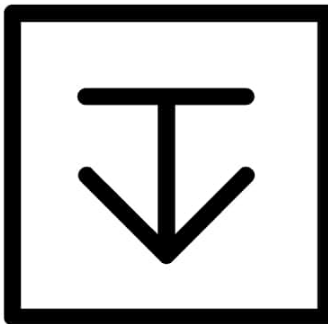
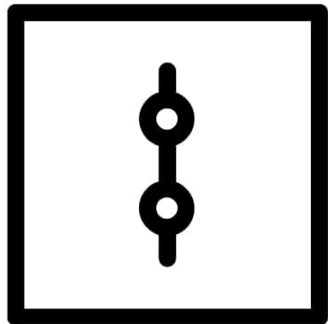
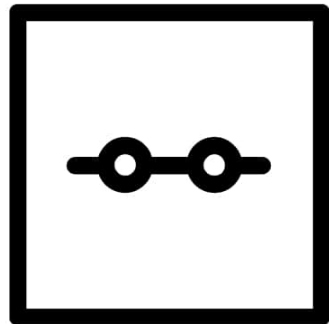
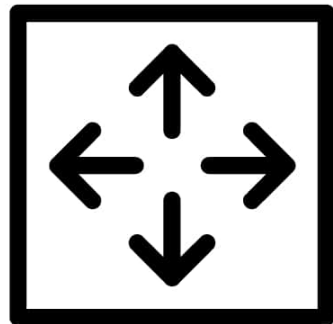
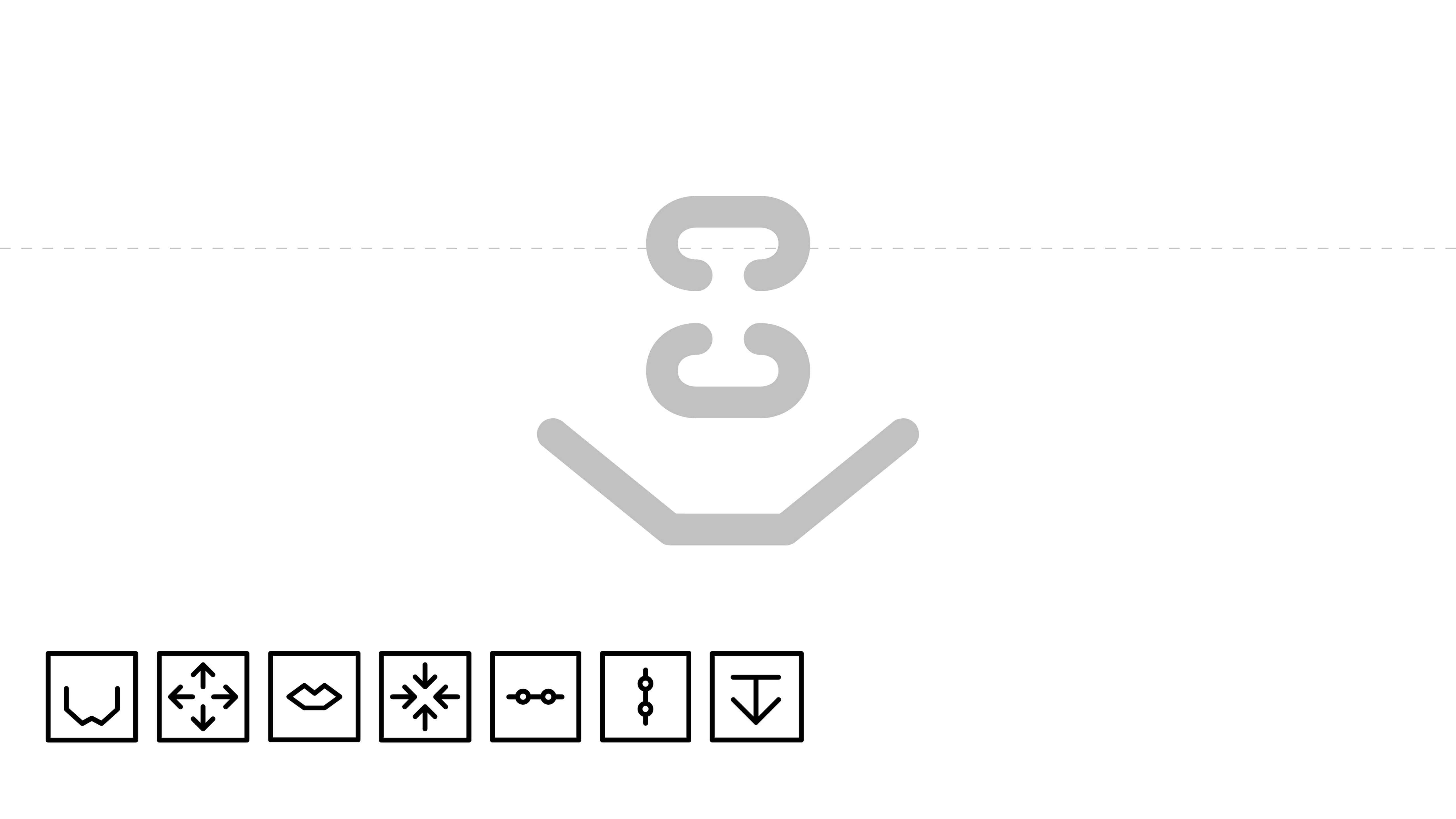
JAW Diverge Vertical Max, CORNER Diverge Horizontal, UPPER VERMILLON Up, LOWER VERMILLON Back

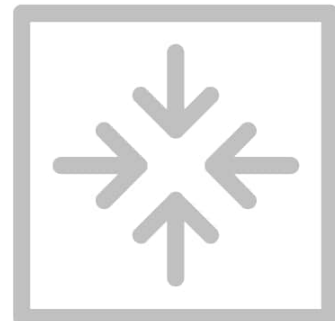
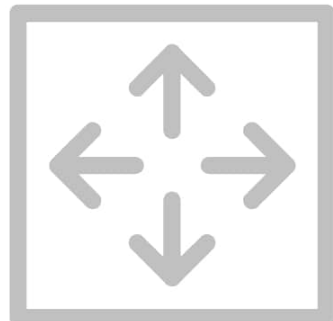
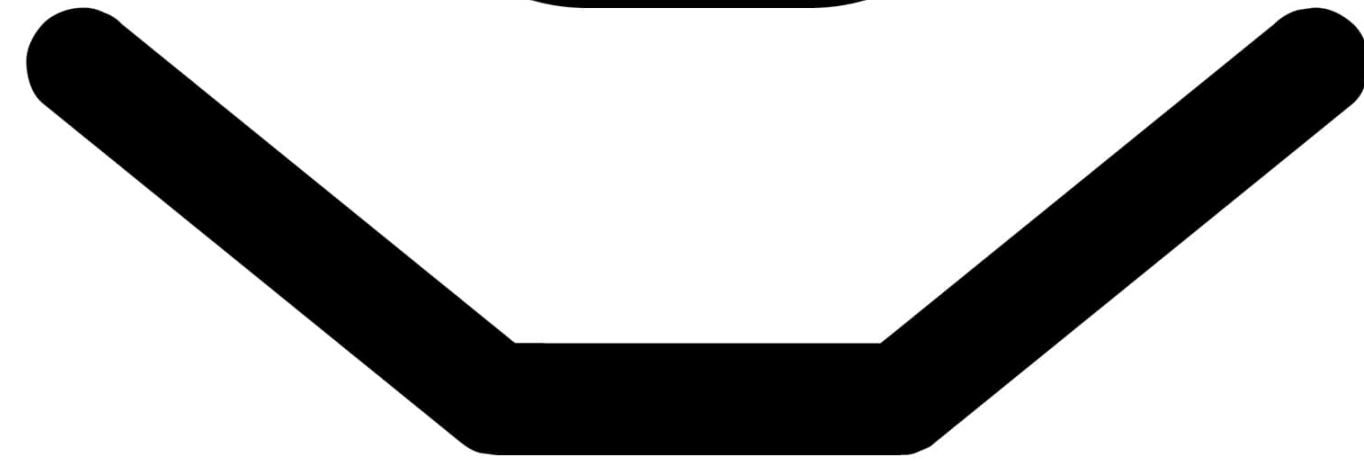
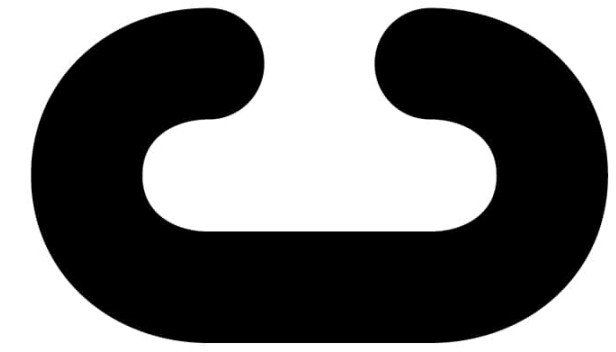
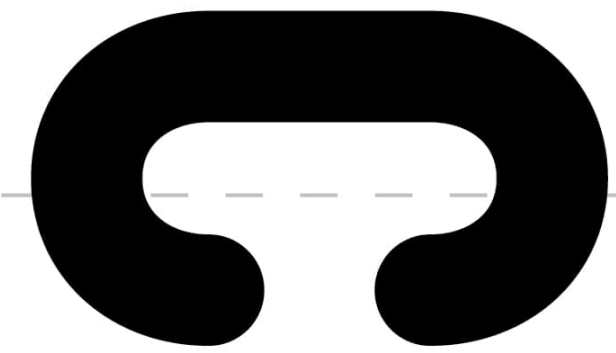


III. MOUTH ACTION SYSTEM

1. graphematic formula (characters)
2. ligatures (glyphs)







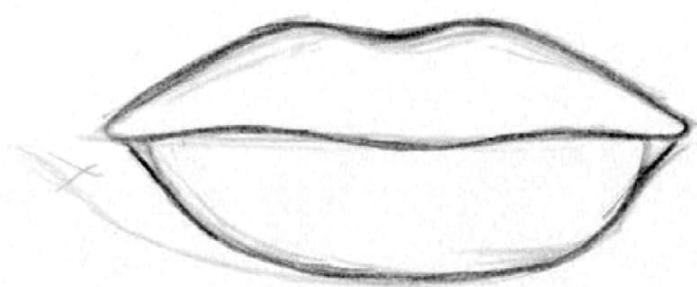
VI. CONCEPTION/DESIGN



Neutral



protruded



Sucked in



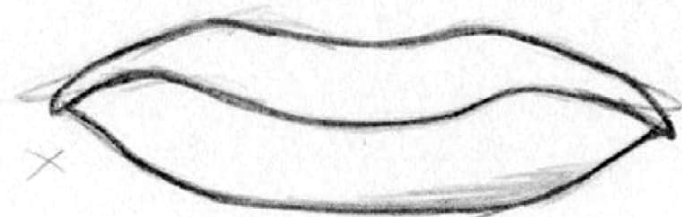
Sucked in



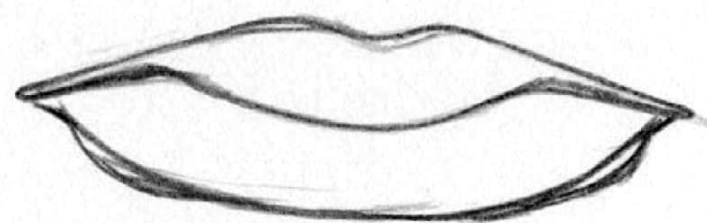
pressed



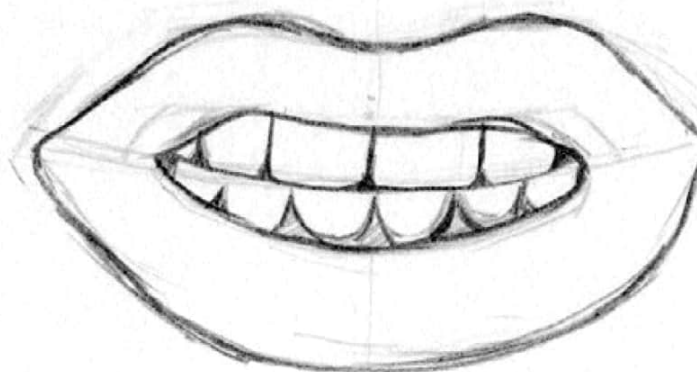
upward



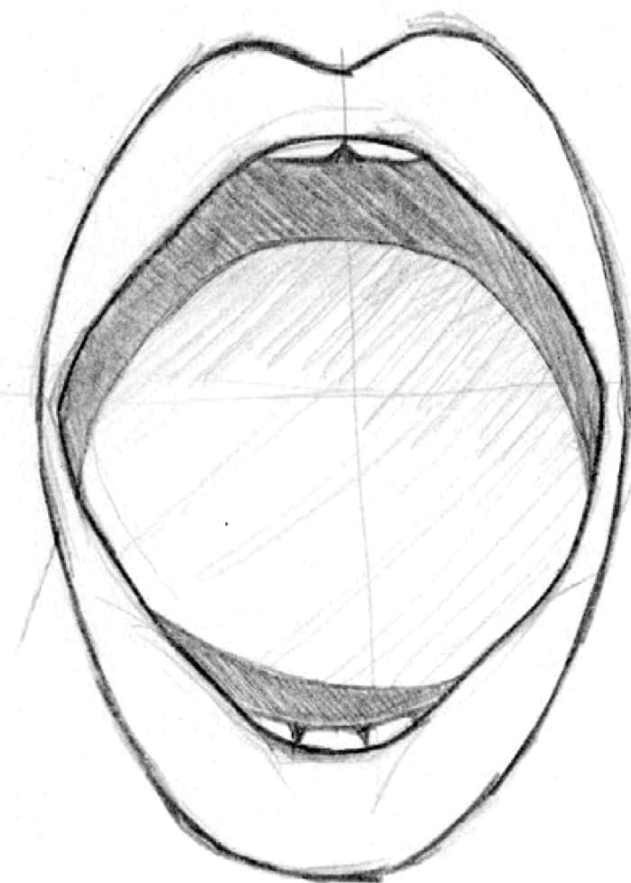
downward



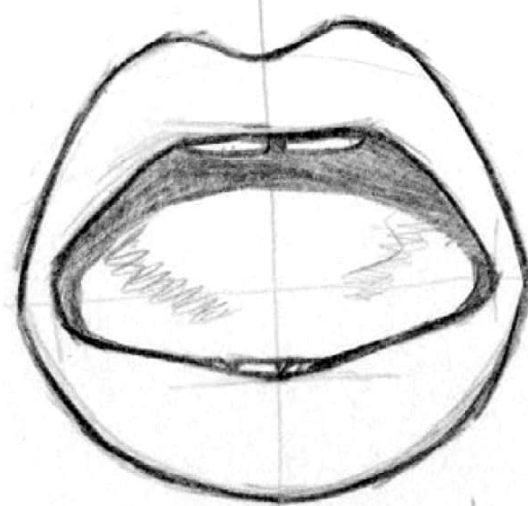
Jaw semi open

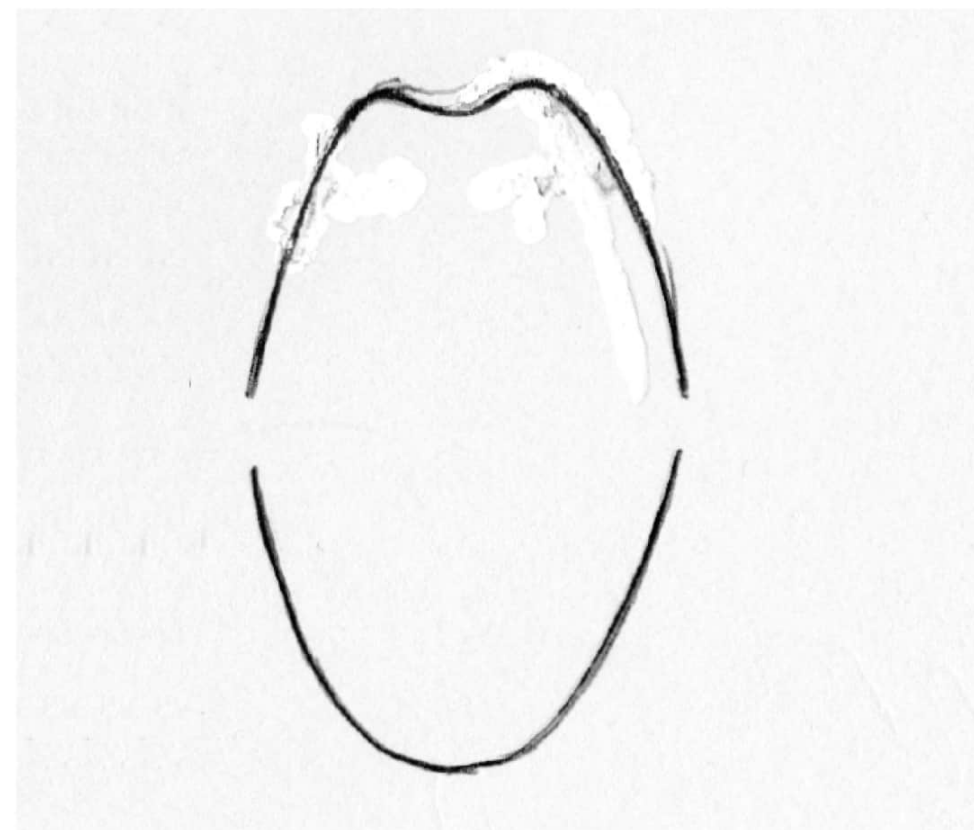
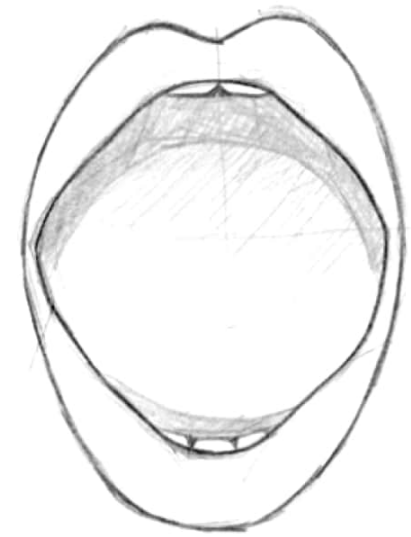
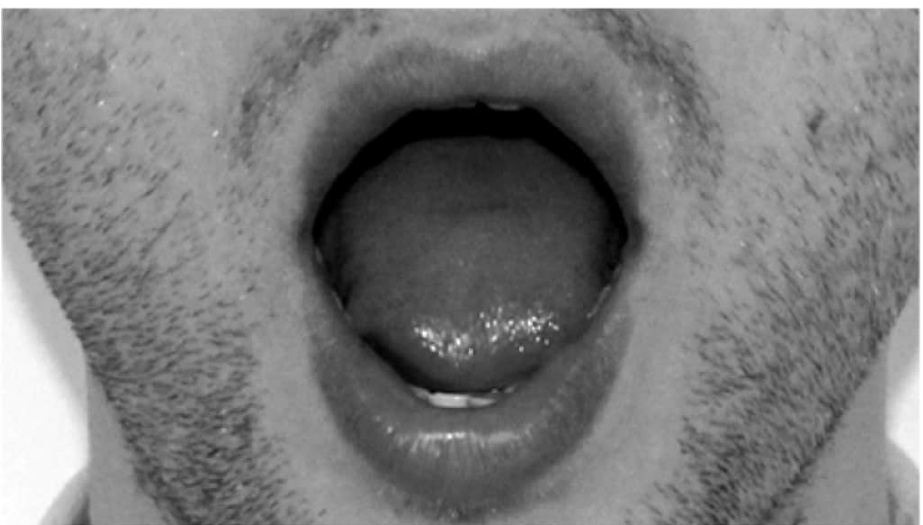
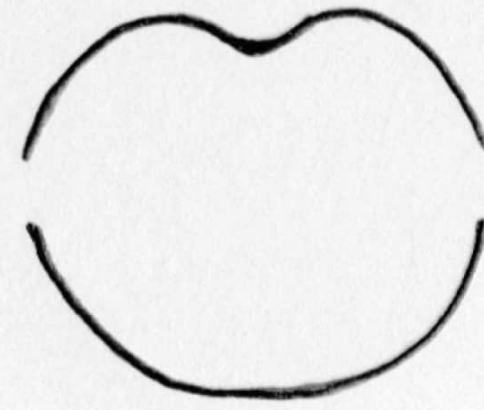
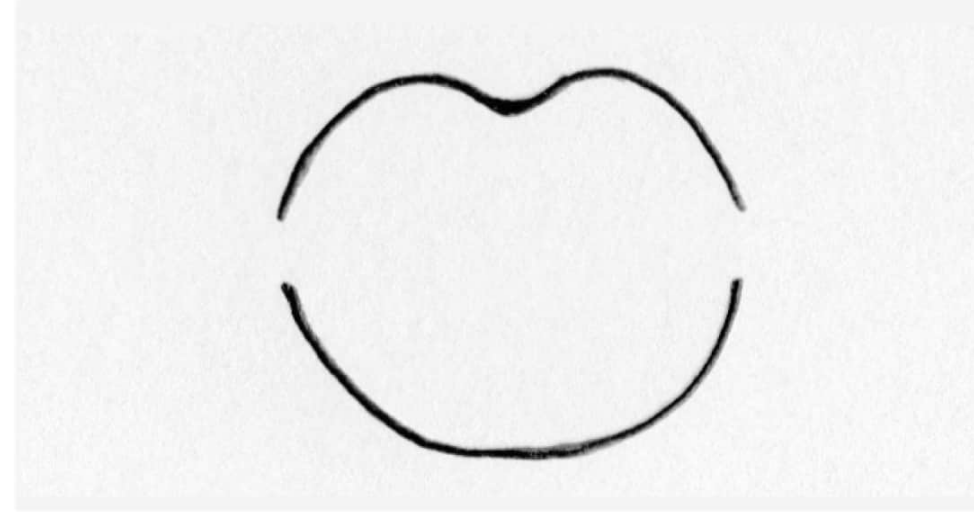
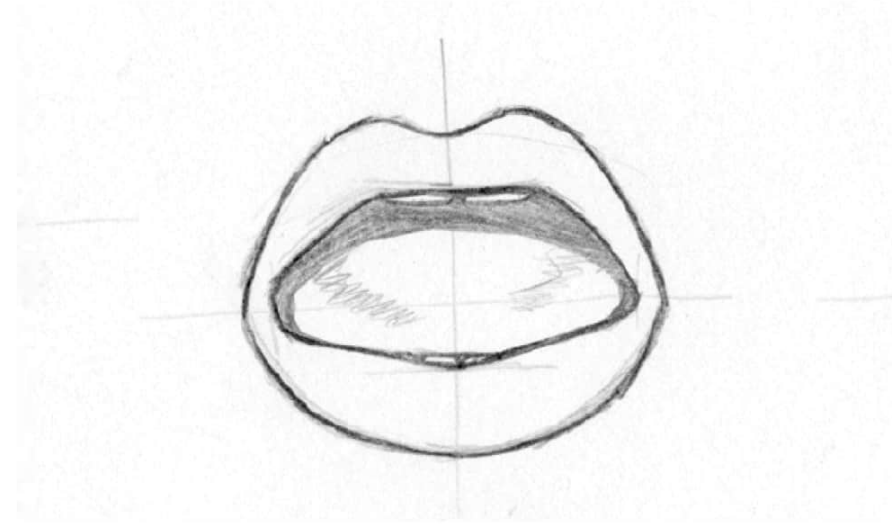
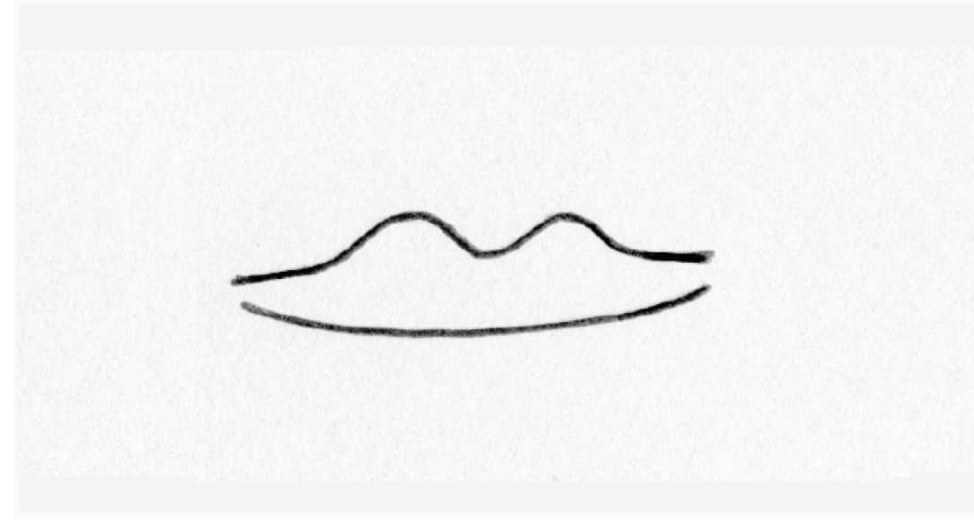


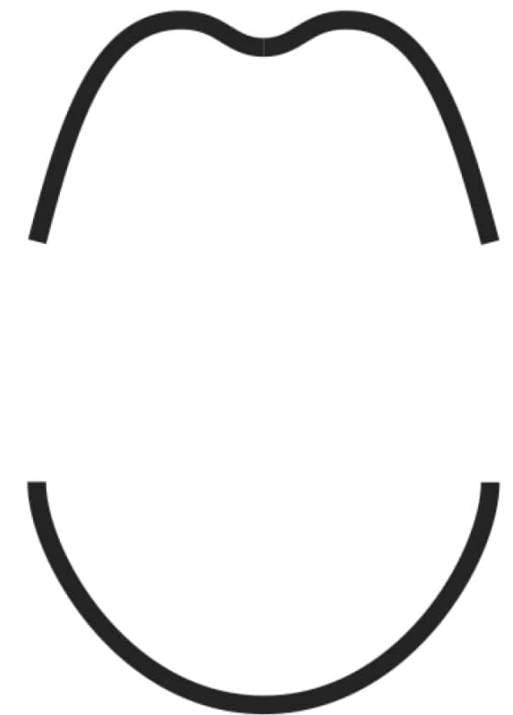
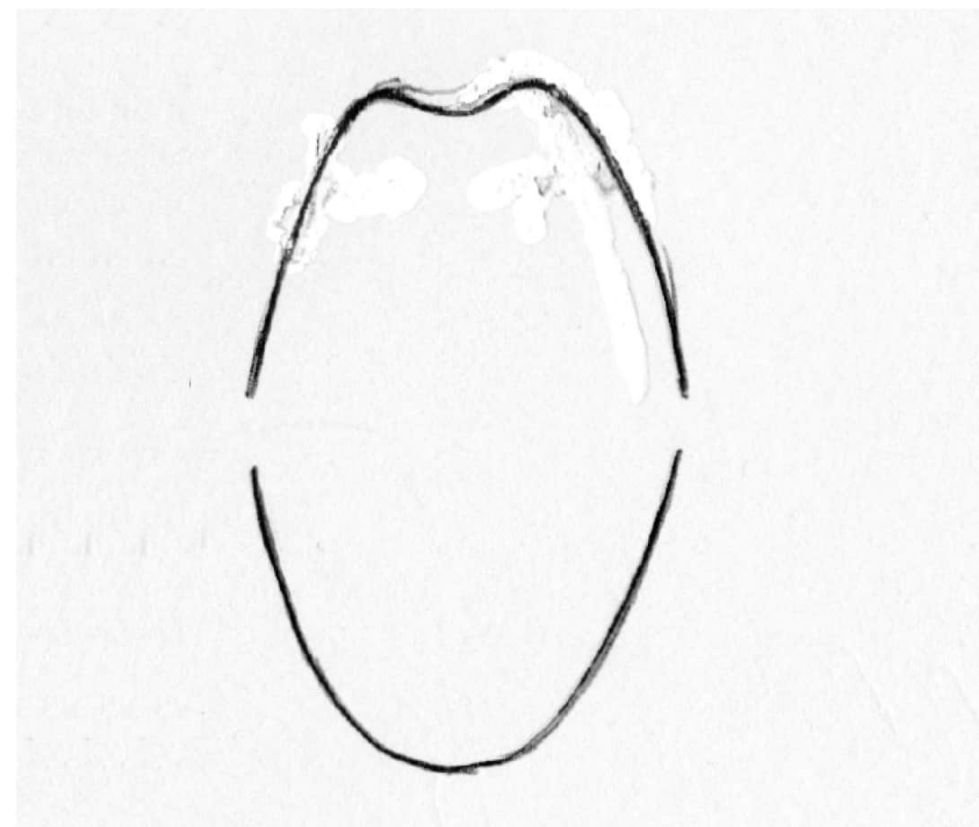
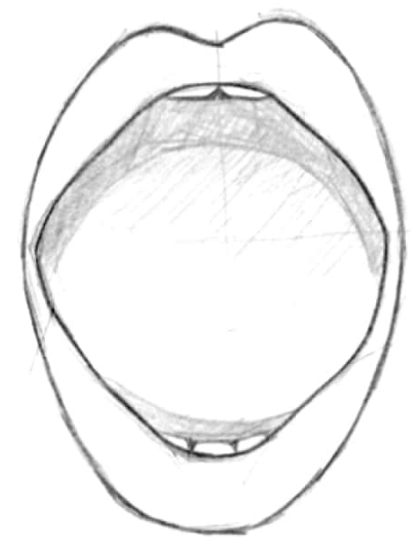
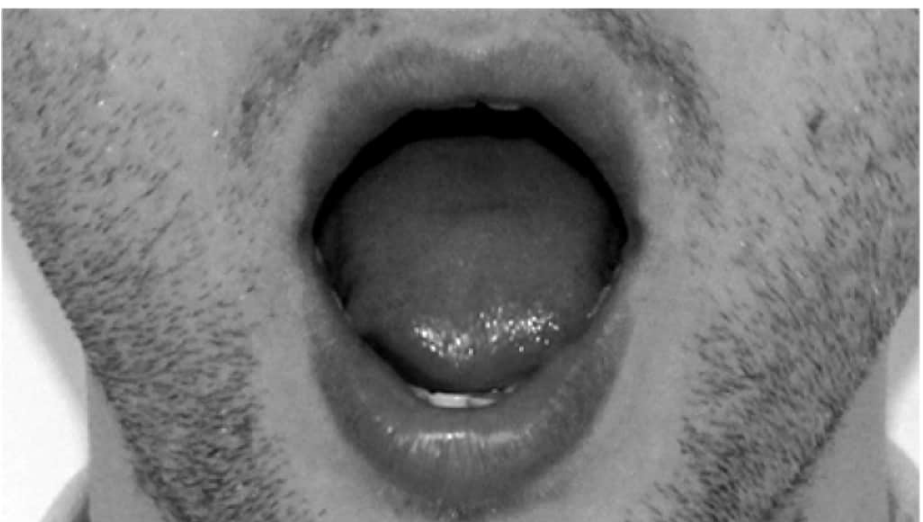
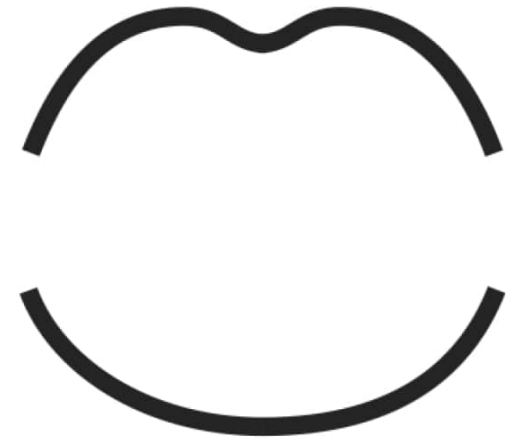
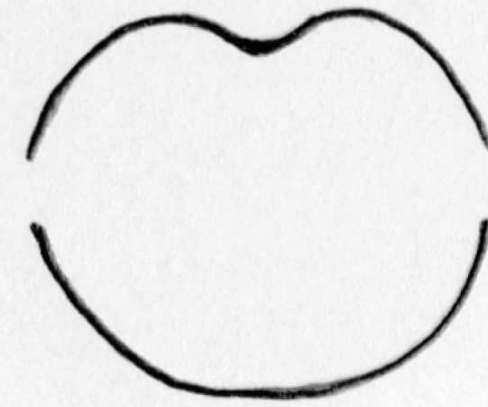
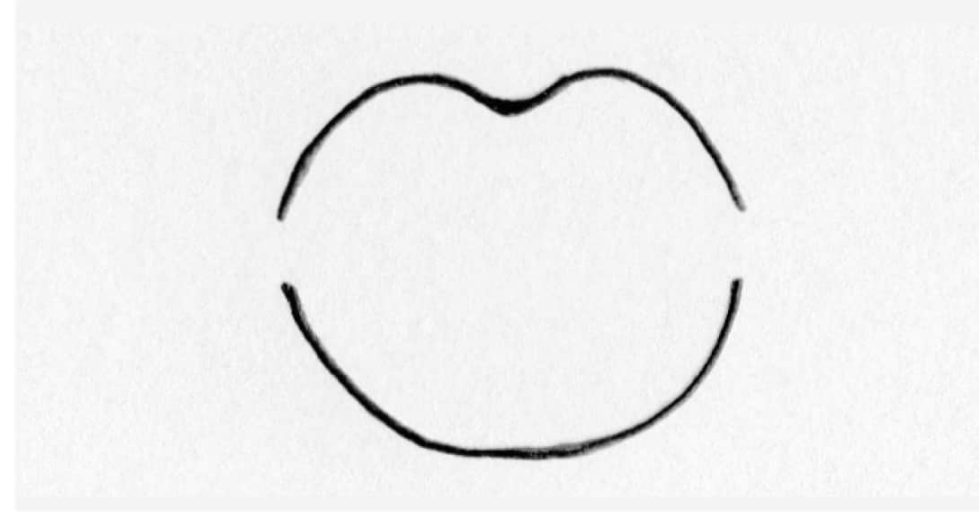
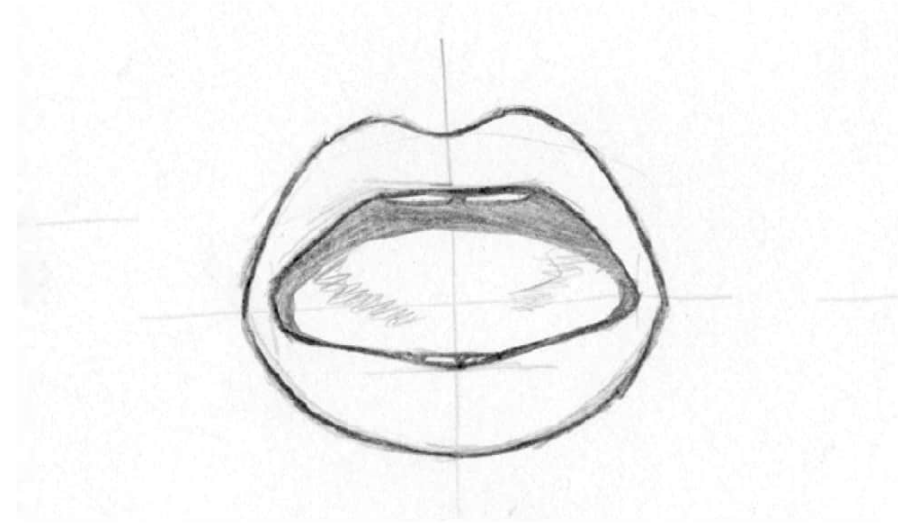
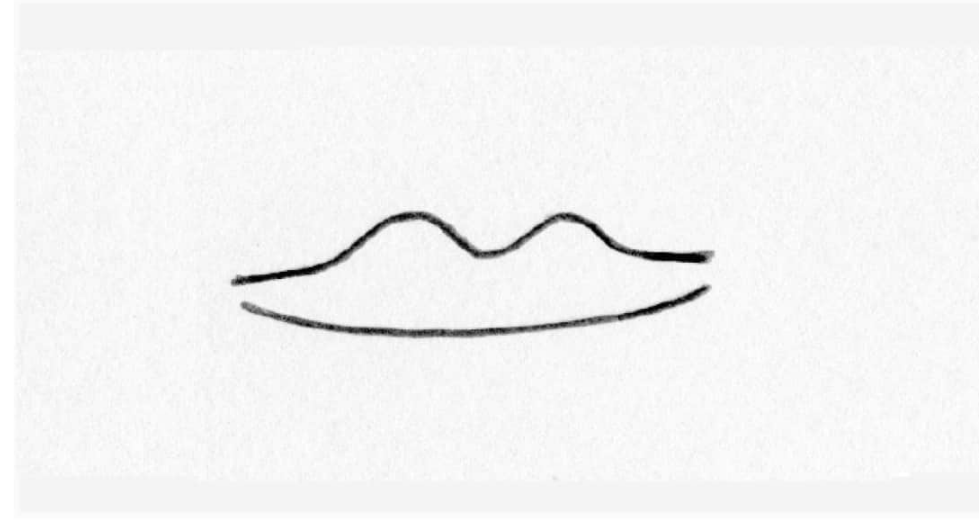
Jaw open

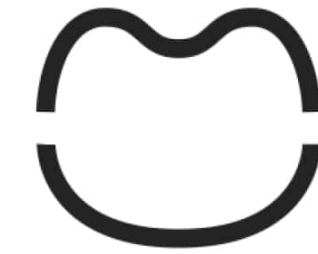
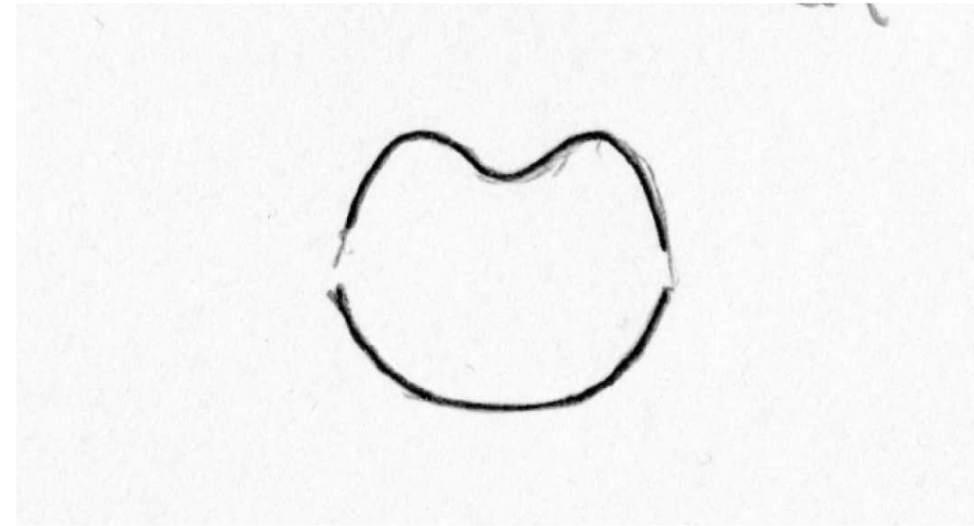
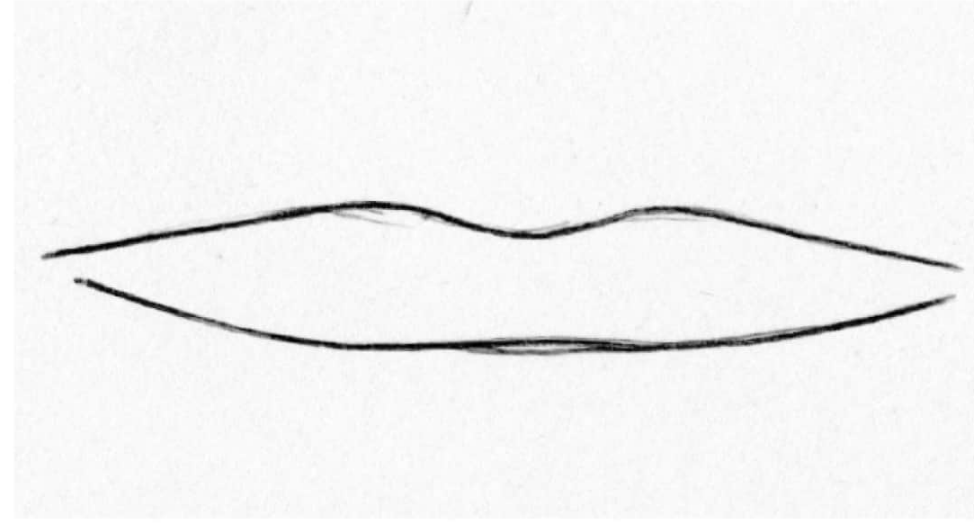


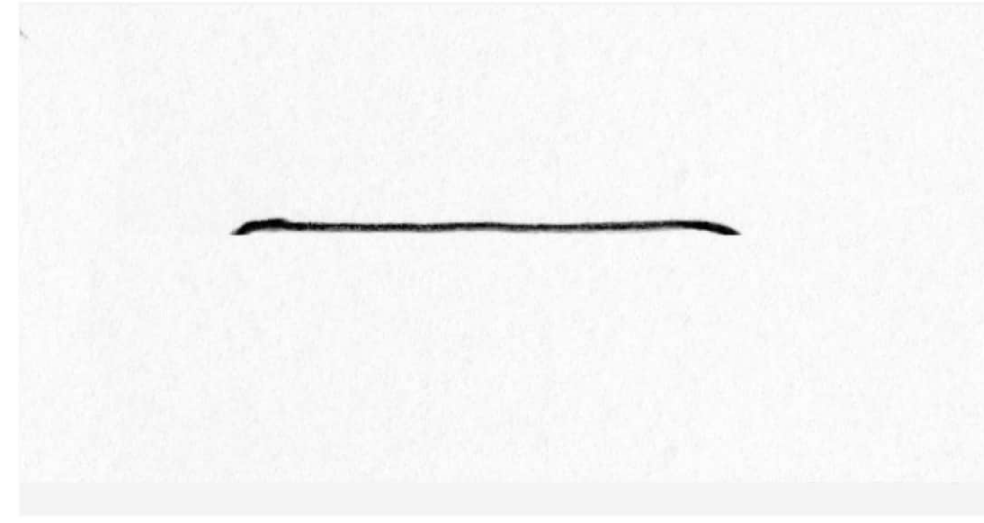
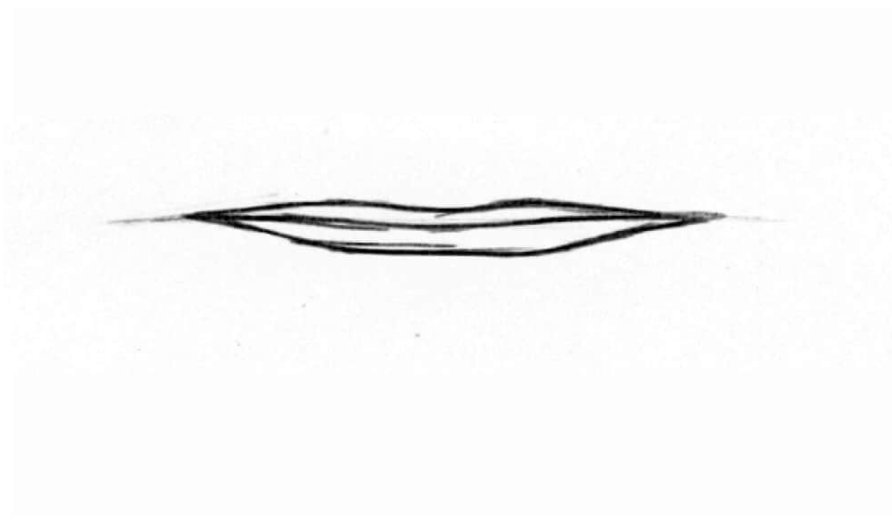
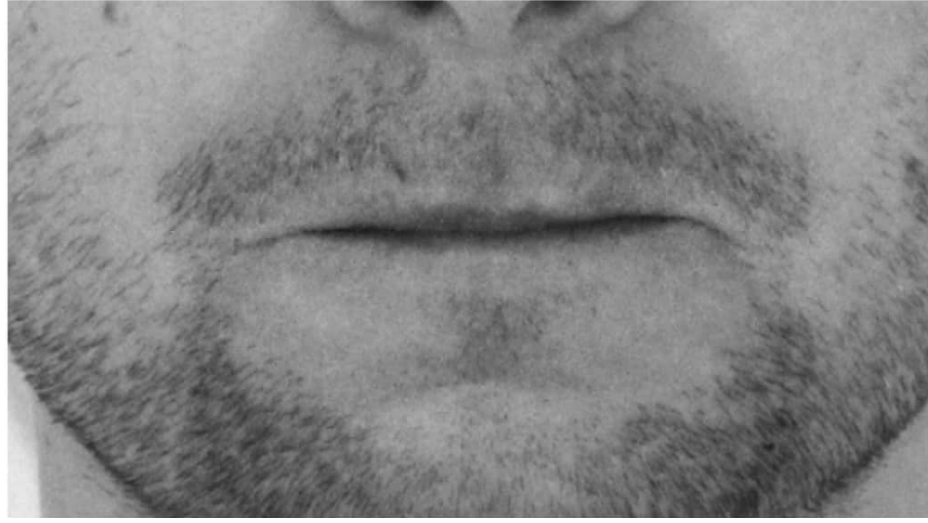
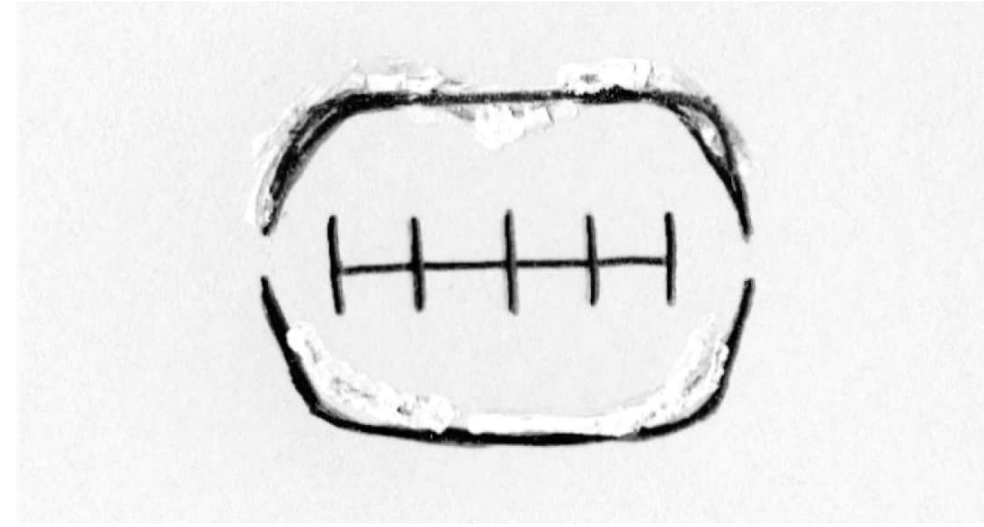
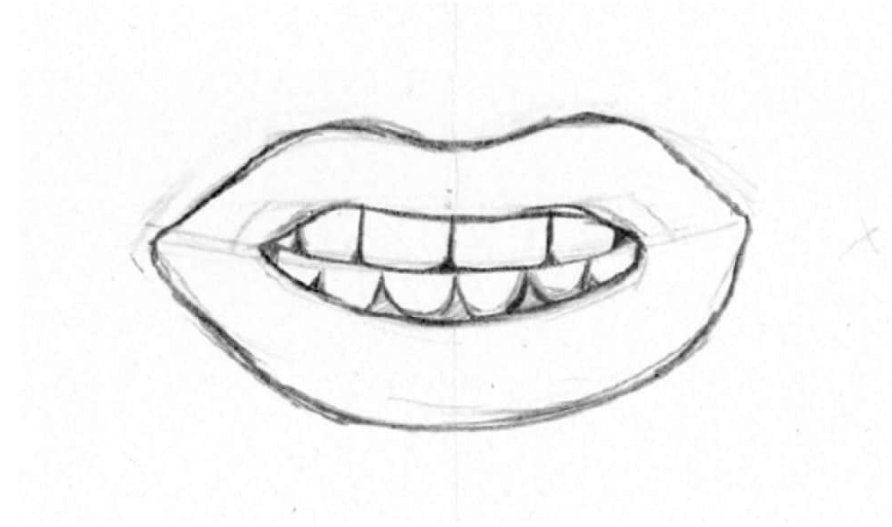
Jaw semi open

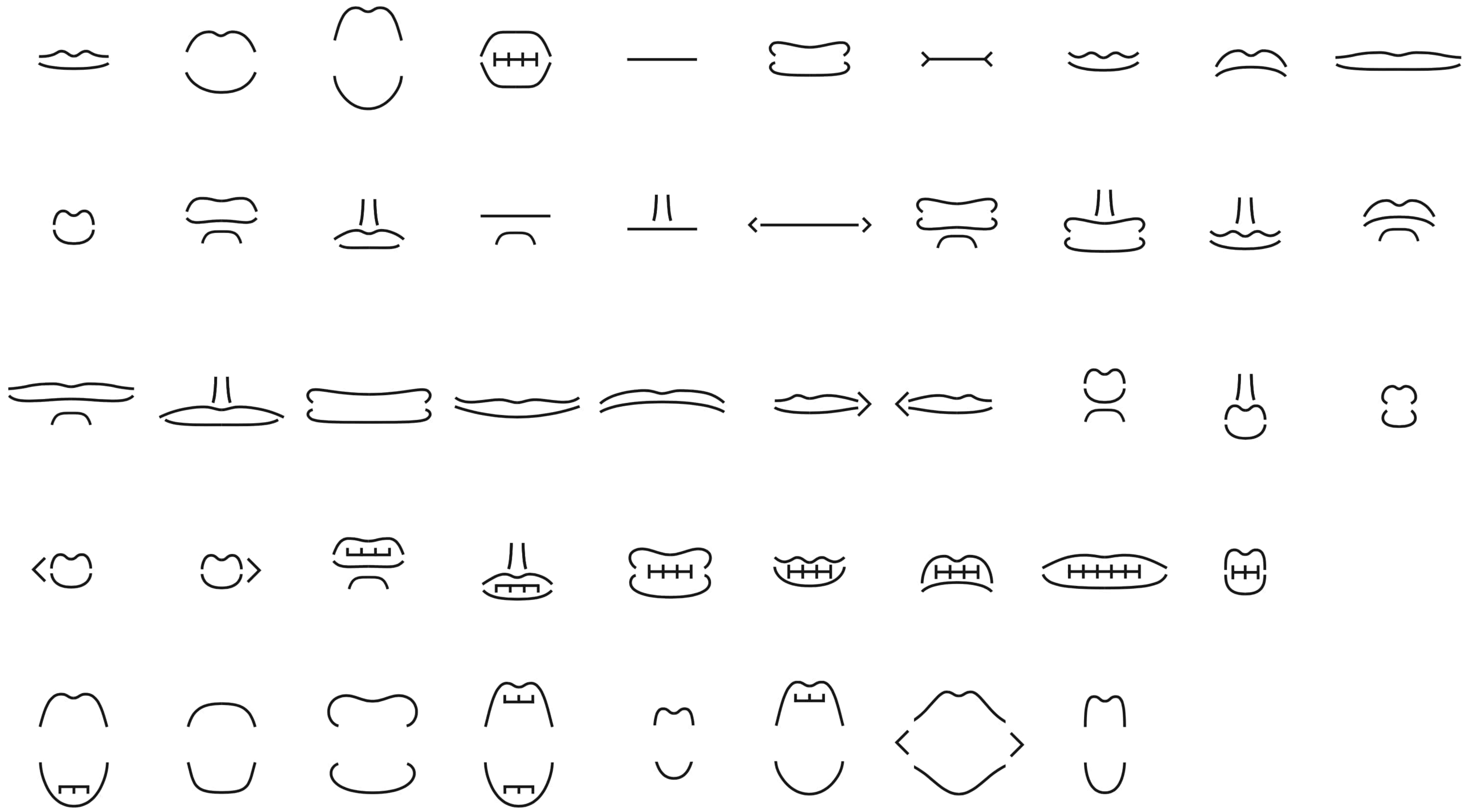


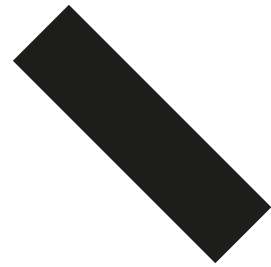
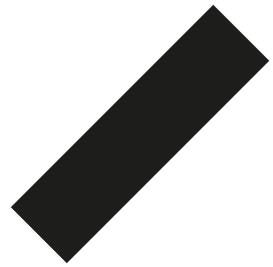


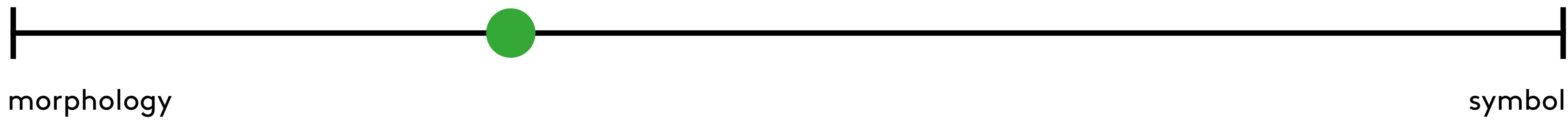


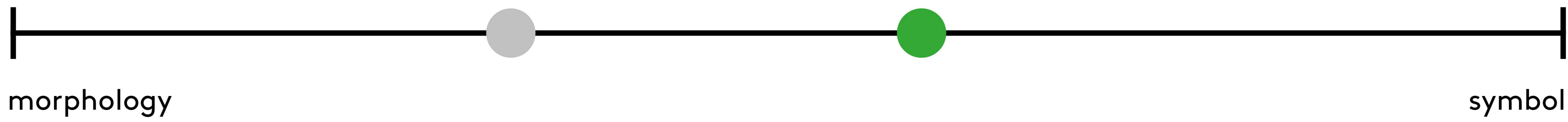


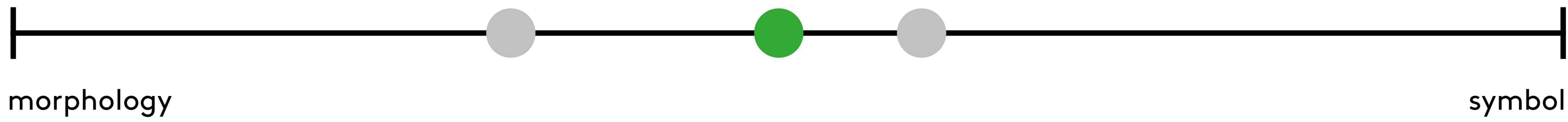


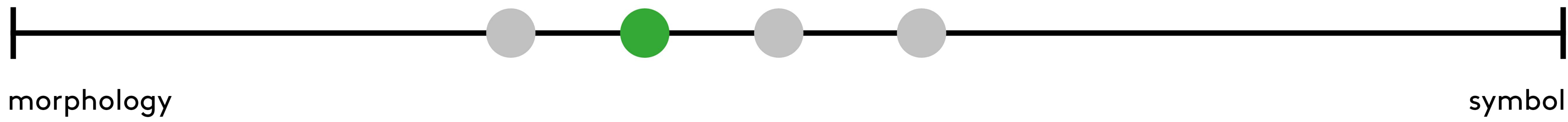






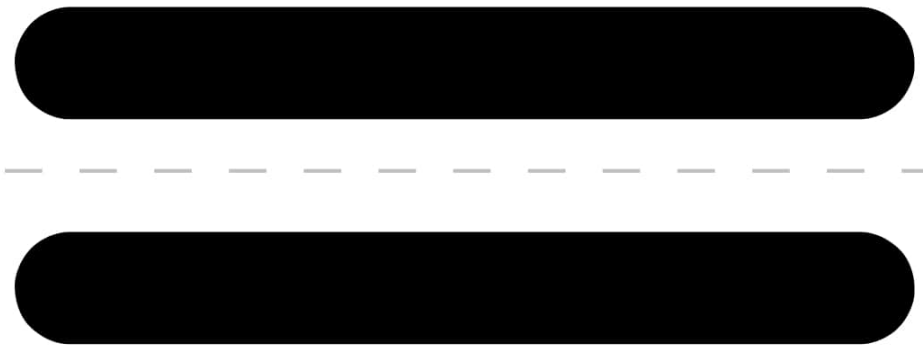
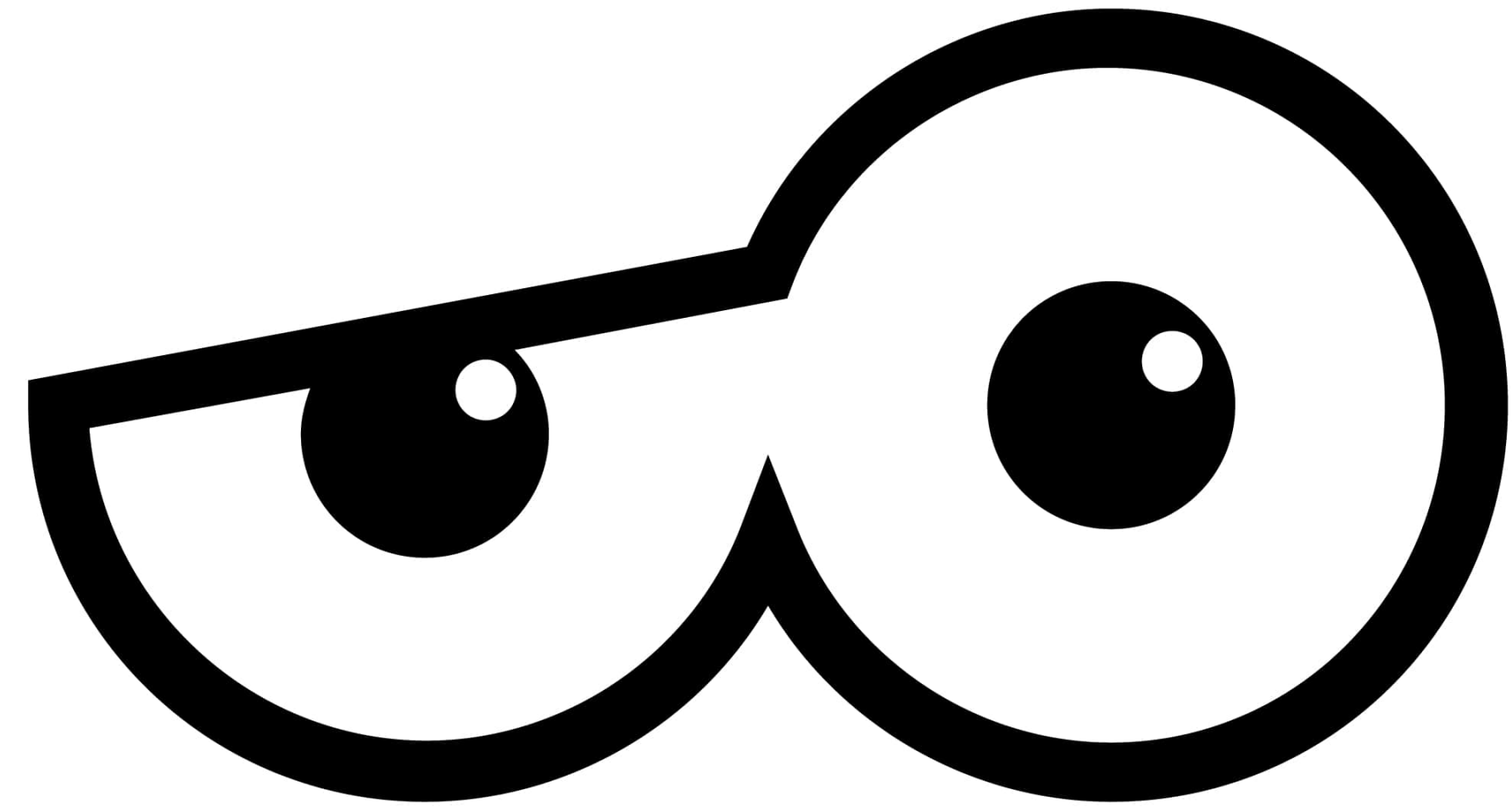












IV. TYPE ENGINEERING

⤴ ⤵ × ⤴ ⤵ ⤶ ⤷ ⤸ ⤹

| — 𐀀 𐀁 𐀂 𐀃 𐀄 𐀅 𐀆

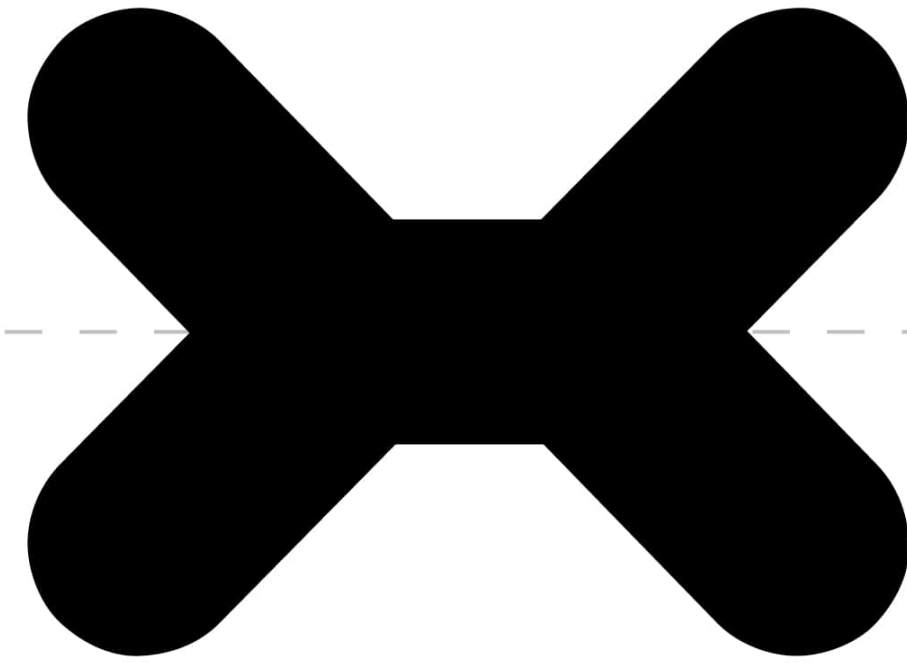
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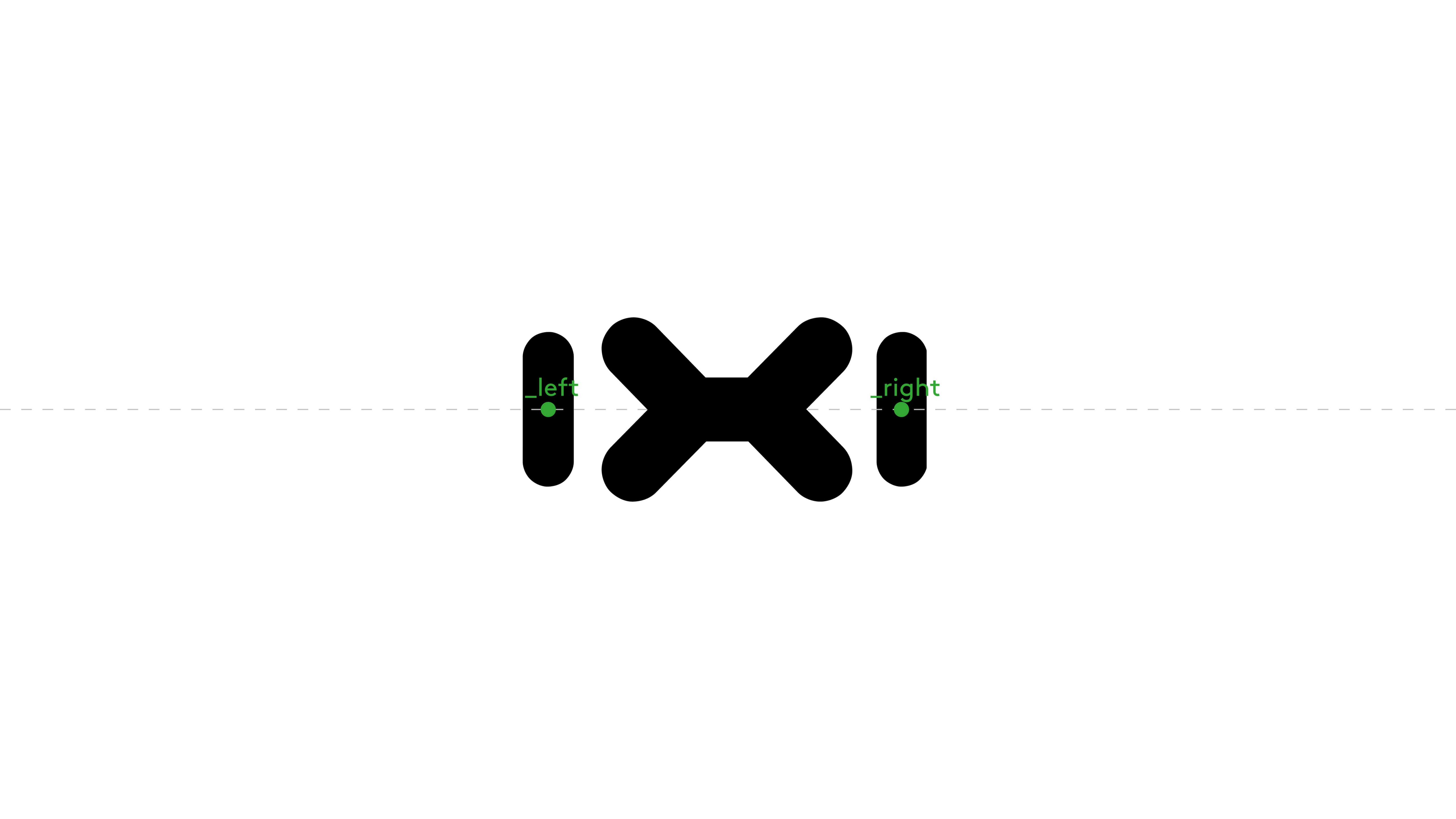
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☑ SLMA_NONE	1017	130	130	E000	3	0		0							
◊ SLMA_MOUTHAC...	1025	-16.00	-17.00	EBBD	4	0		0							
▣ SLMA_HIDDEN	1018	130	131	E5DD	6	0		0							
☑ SLMA_JAW	1025	130	130	EBB8	3	0		0							
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SLMA_CORNERS	500			EBBA	0	0		0							
☐ SLMA_VERMILLON	1015	130.00	130.00	EBE6	2	0		0							
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☑ SLMA_AIR	1026	130	131	EBBC	5	0		0							
☐ SLMA_UPPERSELE...	1017	131.00	131.00	EBE3	5	0		0							
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☑ SLMA_BOTHSELE...	1017	131.00	131.00	EBE5	6	0		0							
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⊗ SLMA_RESTRICTING	1025	130	130	EBE0	5	0		0							
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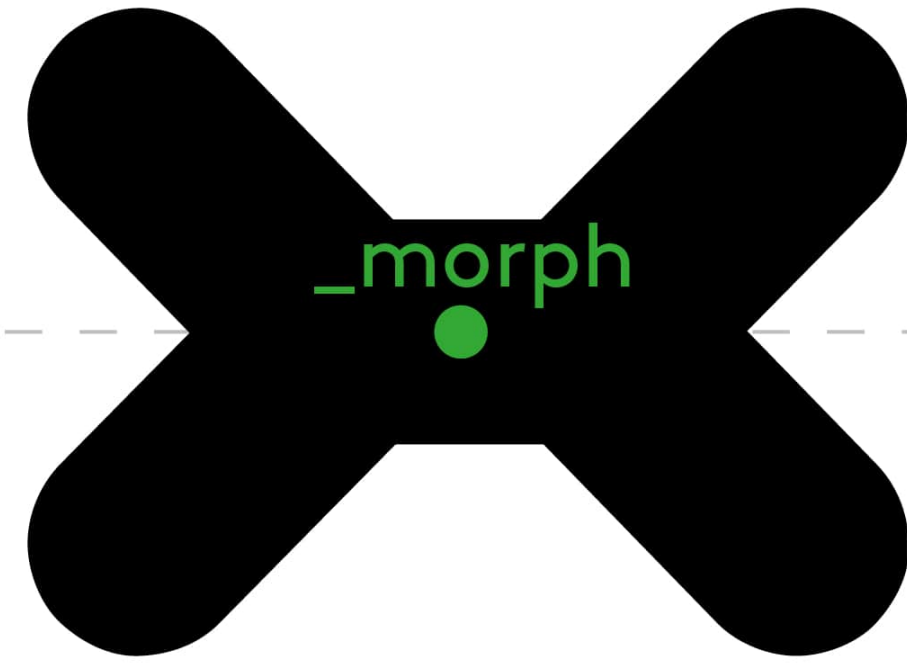
_left



_right











Mouth & Eye Actions

Thanks

Team:

Claudia S. Bianchini
Léa Chèvrefils
Adrien Contesse
Claire Danet
Patrick Doan
Morgane Rébulard
Chloé Thomas

Speakers:

Adrien Contesse
Claire Danet
Morgane Rébulard