

Accessibility in Typography

タイポグラフィにおける
アクセシビリティ

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Content

Processing of Written Communication

- In the Eye
- In the Brain

Vision Impairment

Good Typographic Practice

文字がどのように 情報処理されているか

- 目で起きていること
- 脳で起きていること

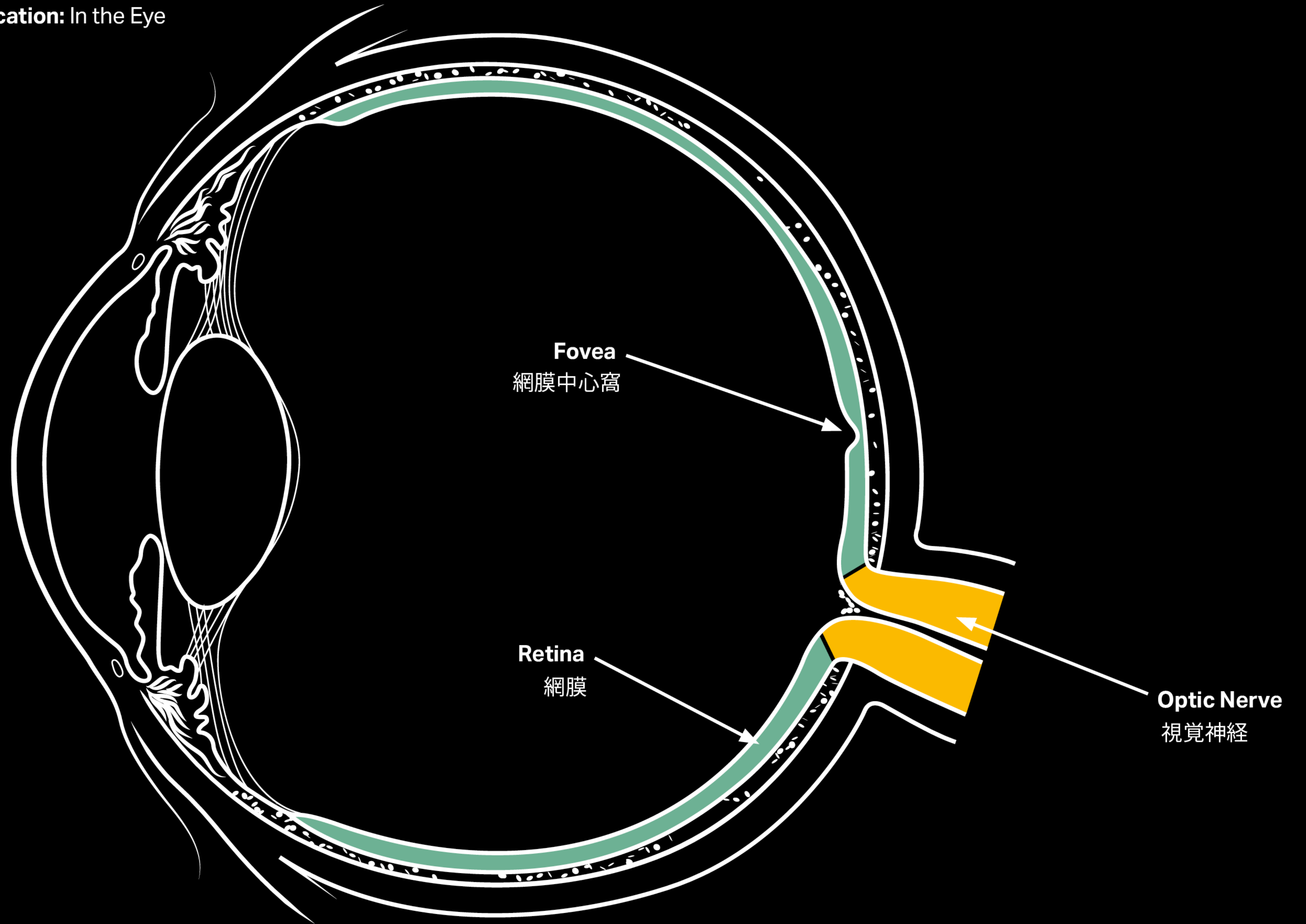
視覚障害について

タイポグラフィにできること

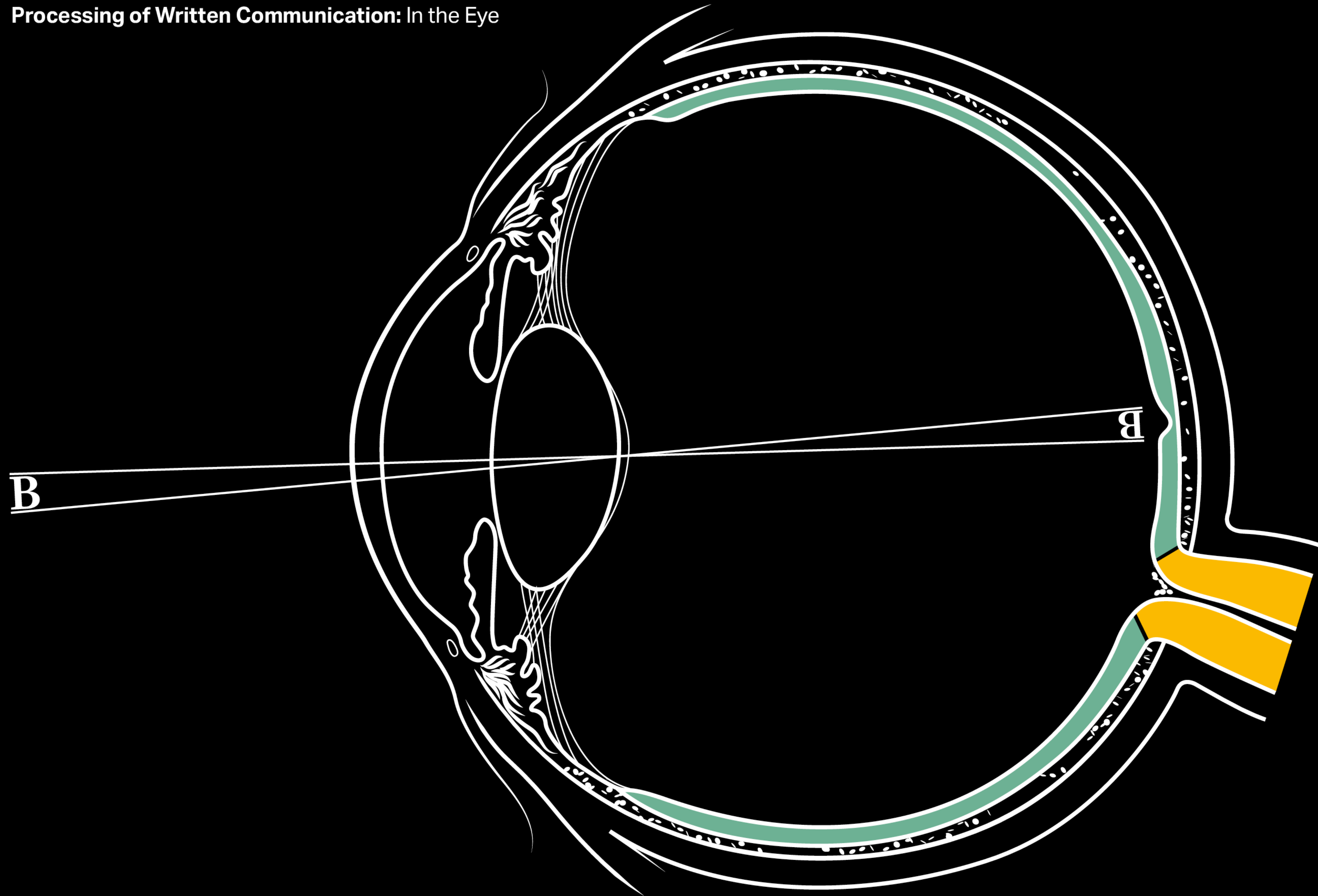
Processing of written communication

文字がどのように情報処理されているか

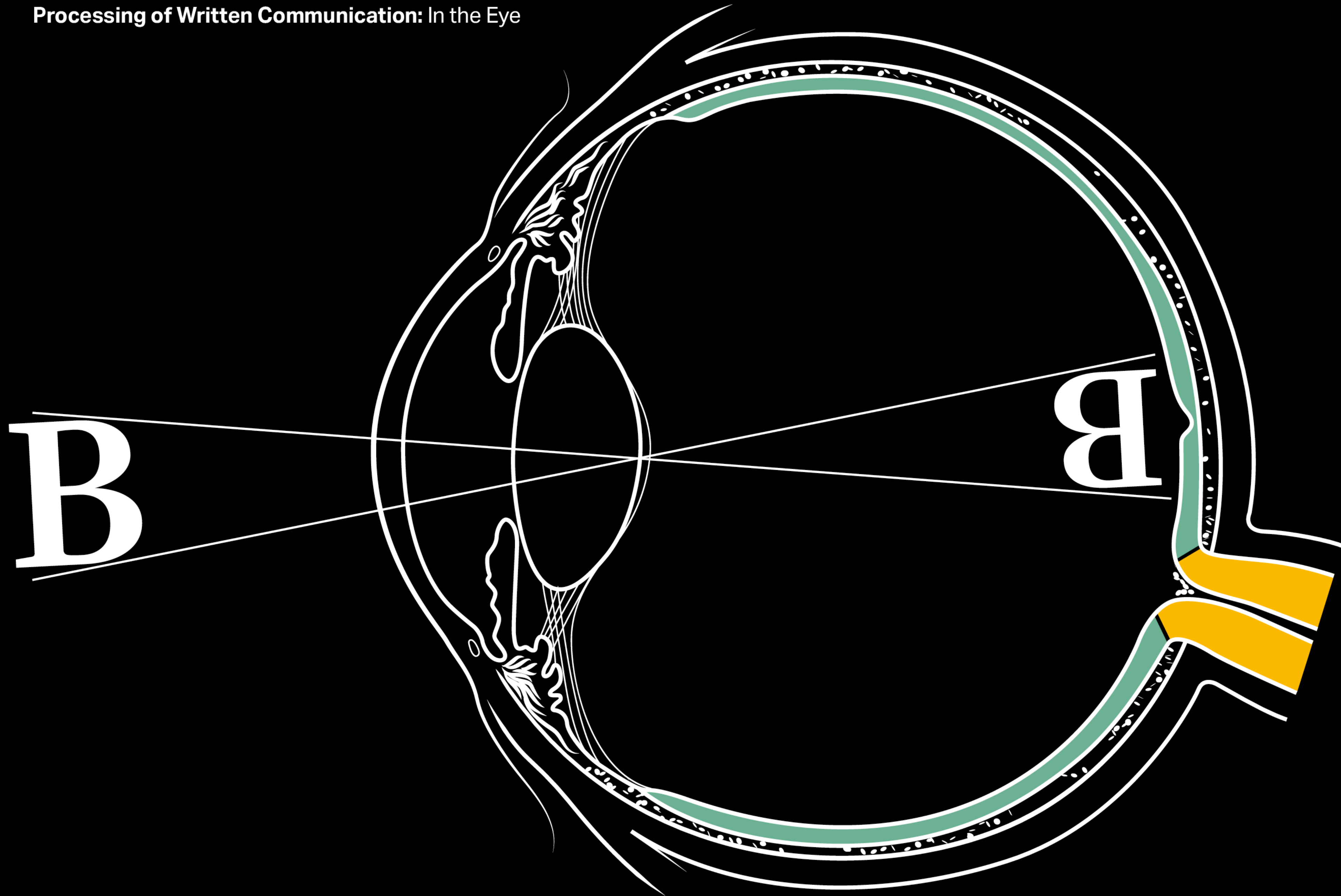
Processing of Written Communication: In the Eye



Processing of Written Communication: In the Eye



Processing of Written Communication: In the Eye



One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed and divided by arches into stiff sections. The bedding was hardly able to cover it and seemed ready to slide off any moment. His many legs, pitifully thin compared with the size of the rest of him, waved about helplessly as he looked.

"What's happened to me?" he thought. It wasn't a dream. His room, a proper human room although a little too small, lay peacefully between its four familiar walls. A collection of textile

Fixation
固視

Saccade
サッケード(眼球運動の一種)

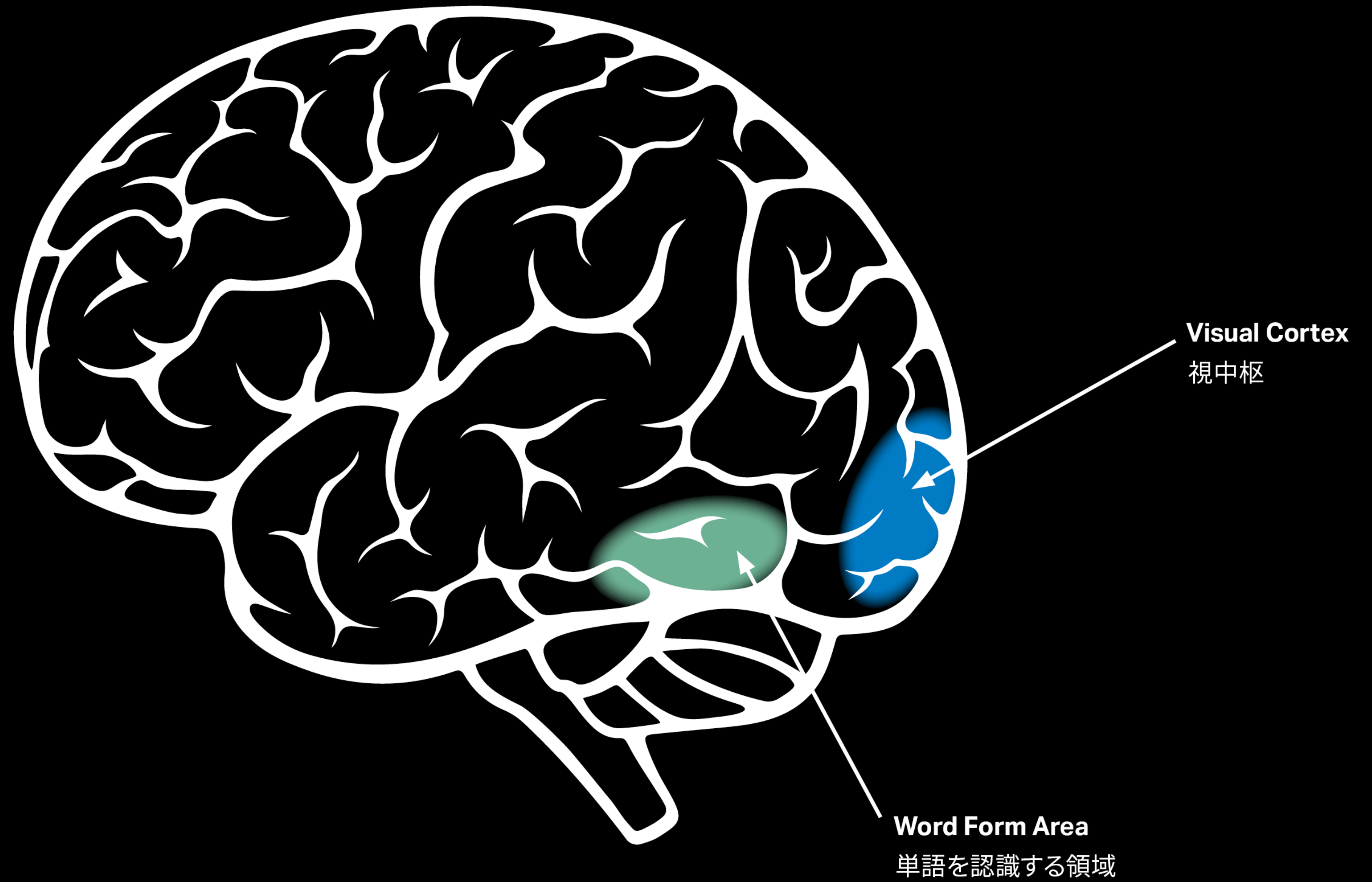
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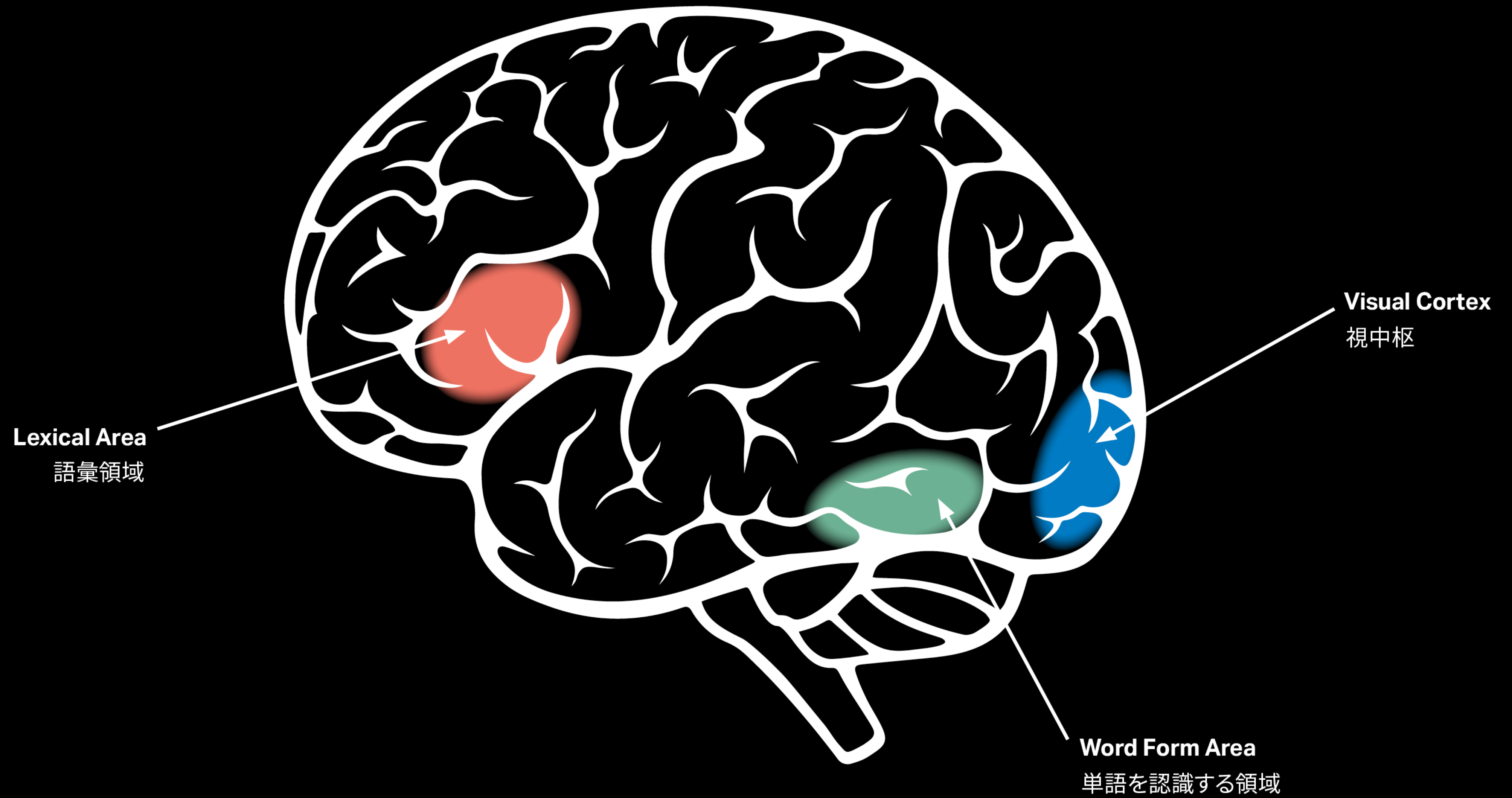
Processing of Written Communication: In the Brain



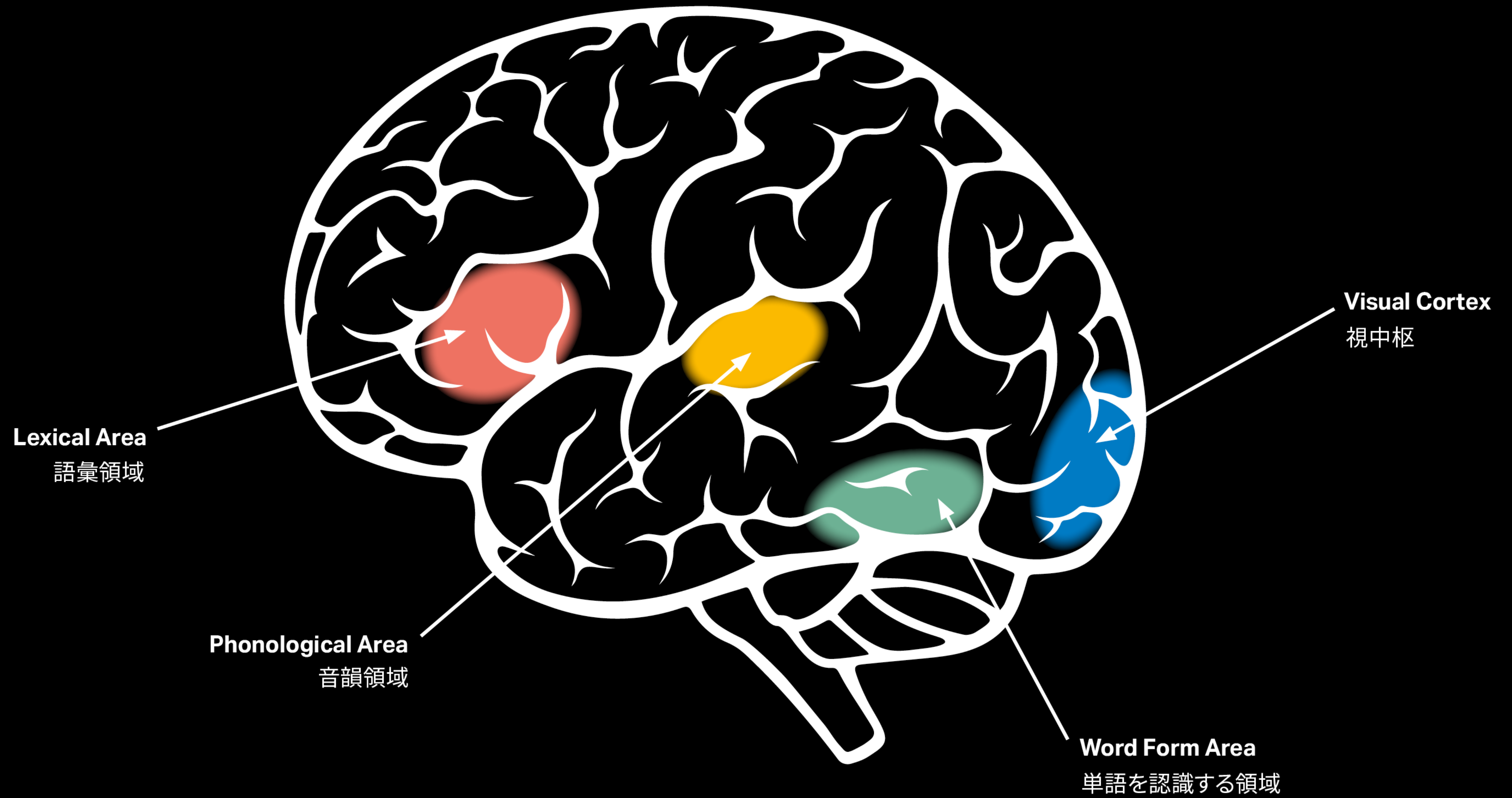
Processing of Written Communication: In the Brain



Processing of Written Communication: In the Brain



Processing of Written Communication: In the Brain



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ONE MORNING, WHEN GREGOR SAMSA WOKE FROM TROUBLED DREAMS, HE FOUND HIMSELF TRANSFORMED IN HIS BED INTO A HORRIBLE VERMIN. HE LAY ON HIS ARMOUR-LIKE BACK, AND IF HE LIFTED HIS HEAD A LITTLE HE COULD SEE HIS BROWN BELLY, SLIGHTLY DOMED AND DIVIDED BY ARCHES INTO STIFF SECTIONS. THE BEDDING WAS HARDLY ABLE TO COVER IT AND SEEMED READY TO SLIDE OFF ANY MOMENT. HIS MANY LEGS, PITIFULLY THIN COMPARED WITH THE SIZE OF THE REST OF HIM, WAVED ABOUT HELPLESSLY AS HE LOOKED.

"WHAT'S HAPPENED TO ME?" HE THOUGHT IT WASN'T A

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“What’s happened to me?” he thought. It wasn’t a dream. His room, a proper human room, although a little

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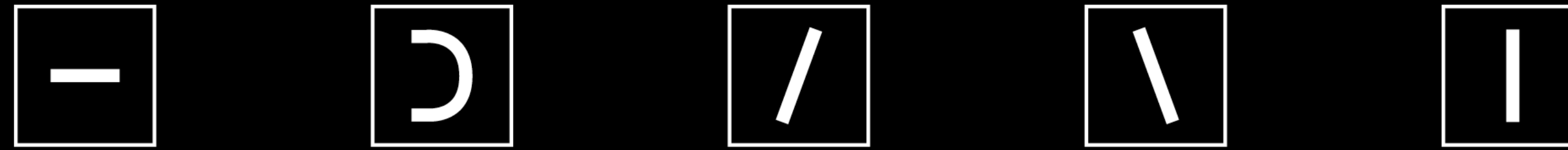
orangery

ORANGERY

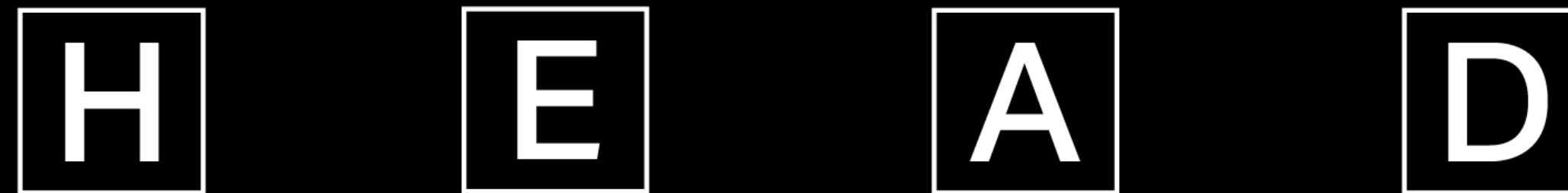
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"WHAT'S HAPPENED TO ME?" HE THOUGHT IT WASN'T A

Processing of Written Communication: In the Brain



Feature Units
特徴



Letter Units
文字



Word Units
単語

Processing of Written Communication: In the Brain

A

Stimulus
視覚情報

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Feature Units
特徴

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Letter Units
文字

MEAT

SALE

HEAD

Word Units
単語

Processing of Written Communication: In the Brain

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Stimulus
視覚情報

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Feature Units
特徴

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Letter Units
文字

MEAT

SALE

HEAD

Word Units
単語

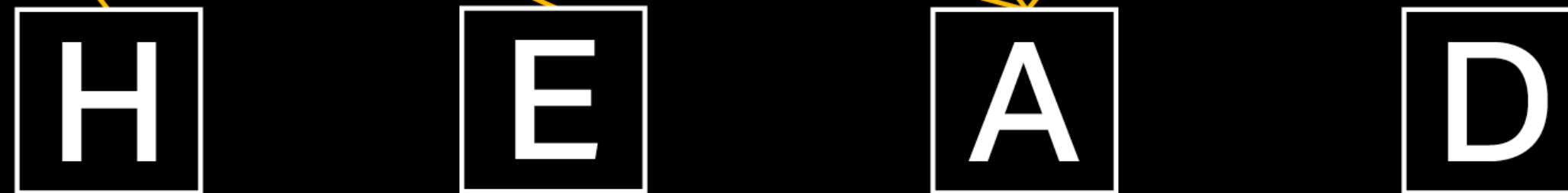
Processing of Written Communication: In the Brain

A

Stimulus
視覚情報



Feature Units
特徴



Letter Units
文字



Word Units
単語

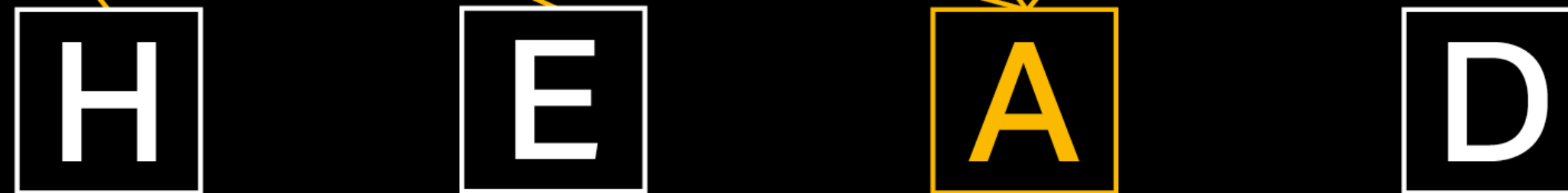
Processing of Written Communication: In the Brain

A

Stimulus
視覚情報



Feature Units
特徴

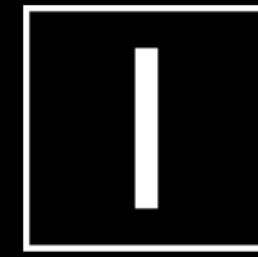
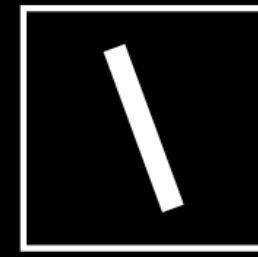
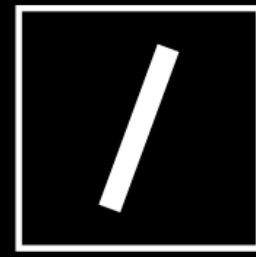
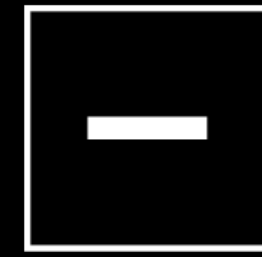


Letter Units
文字



Word Units
単語

Processing of Written Communication: In the Brain



H

H

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EAP

MEAT

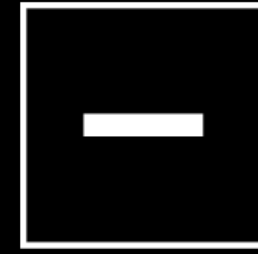
SALE

HEAD

HAND

AGE

HEAD



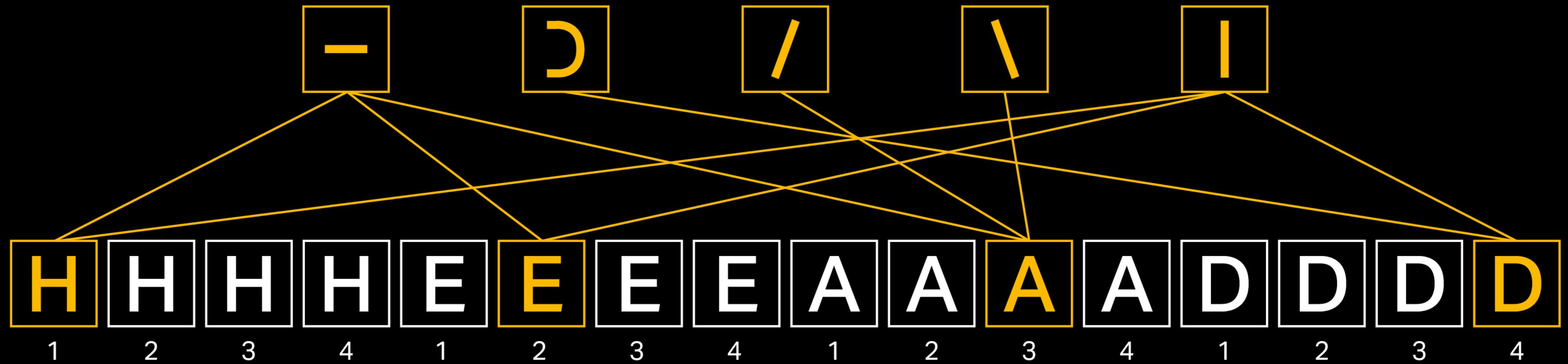
EAP MEAT SALE HEAD HAND AGE

HEAD



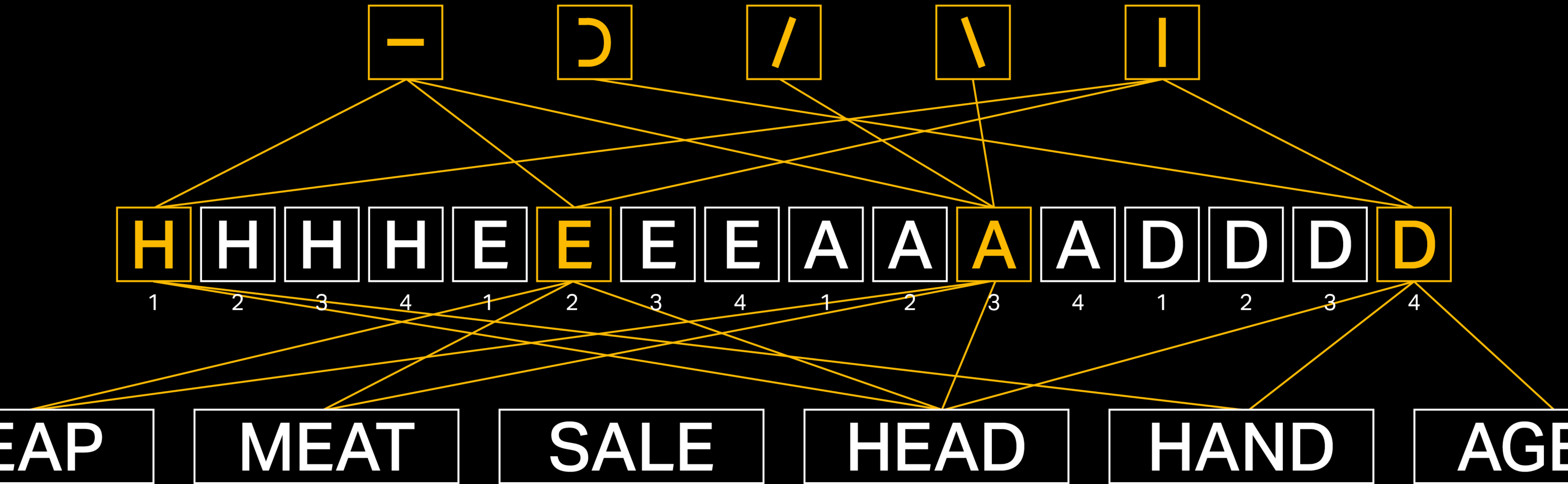
EAP MEAT SALE HEAD HAND AGE

HEAD

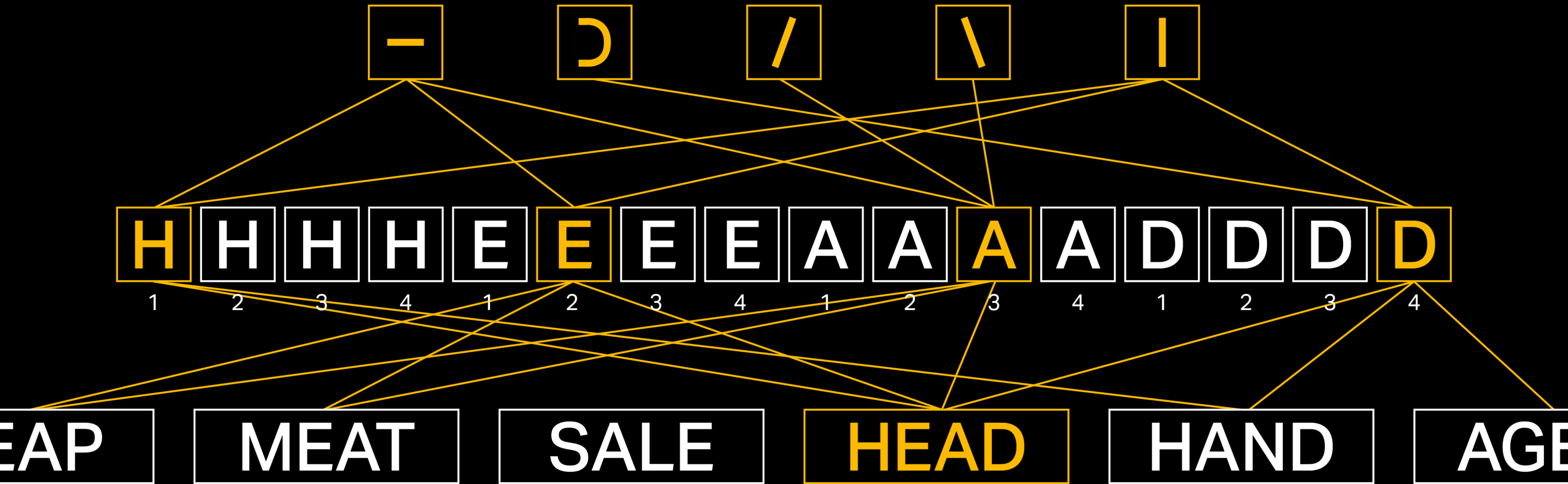


EAP MEAT SALE HEAD HAND AGE

HEAD



HEAD



Processing of Written Communication: In the Brain

HEAD

Processing of Written Communication: In the Brain

XXXXX

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XXXXX
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Processing of Written Communication: In the Brain

XXXXX

M
XXXXX
D

PNYD

Processing of Written Communication: In the Brain

XXXXX

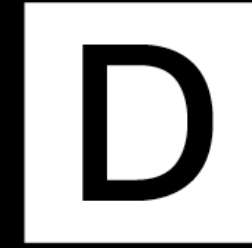
M
XXXXX
D



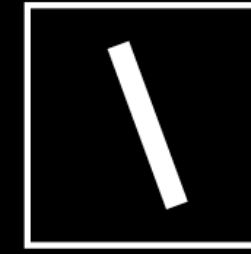
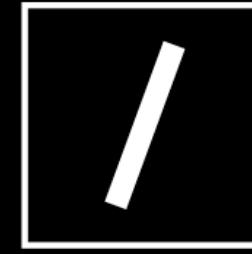
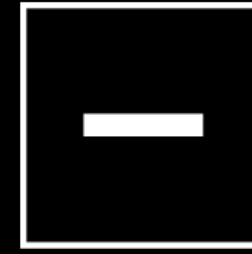
Stimulus

視覚情報

Processing of Written Communication: In the Brain

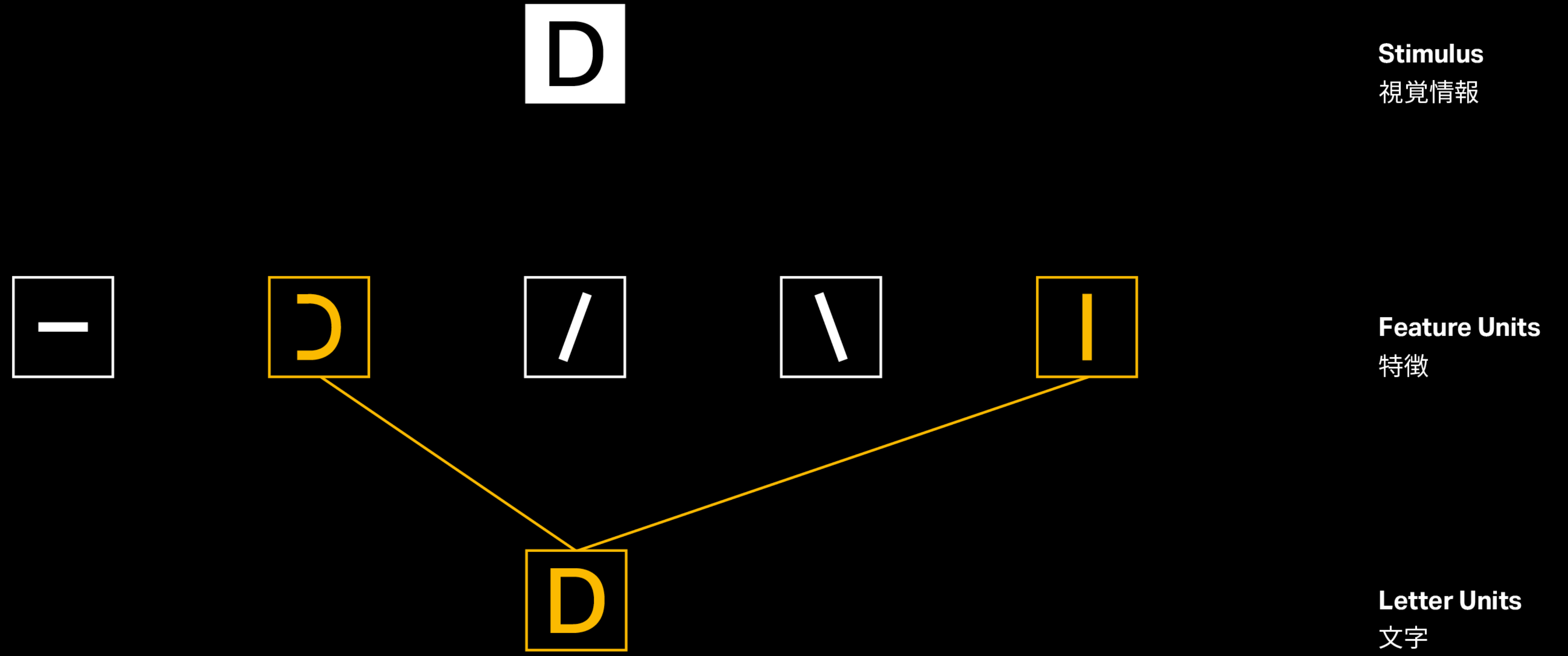


Stimulus
視覚情報



Feature Units
特徴

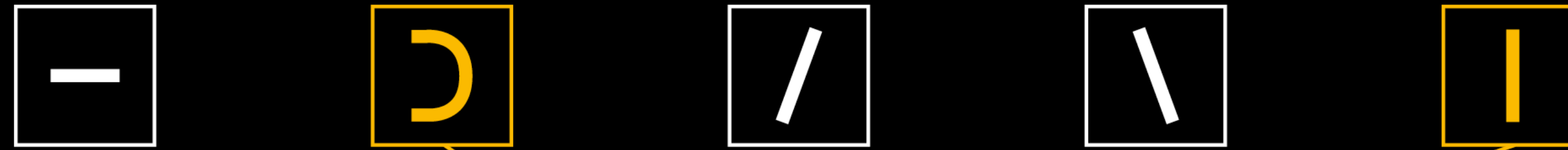
Processing of Written Communication: In the Brain



Processing of Written Communication: In the Brain

HEAD

Stimulus
視覚情報



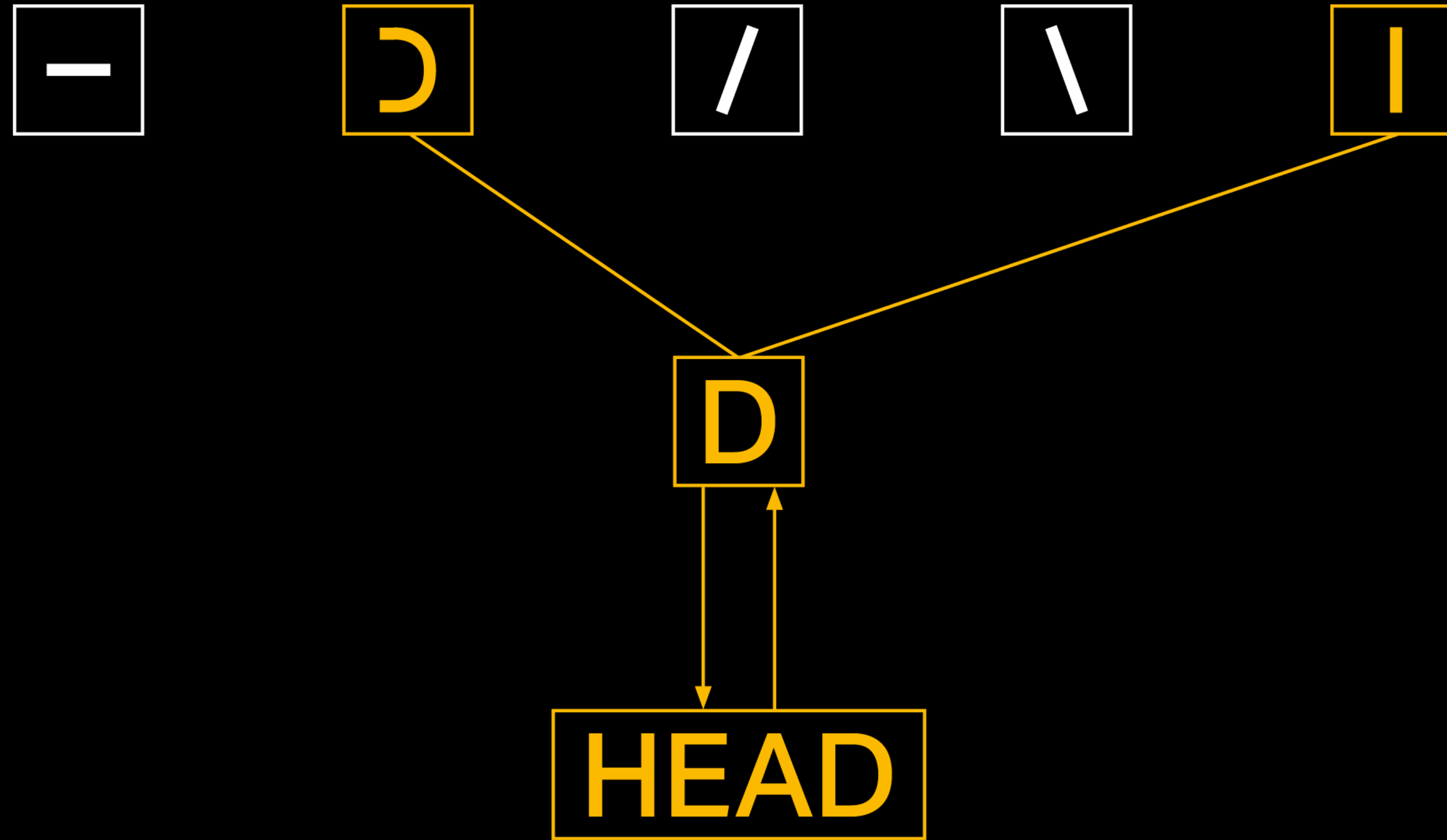
Feature Units
特徴

D

Letter Units
文字

HEAD

Word Units
単語



Vision Impairment

視覚障害について

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown body slightly domed and divided by arches into stiff sections. The bedding was hardly able to cover it and seemed ready to slide off any moment. His many legs, pitifully thin compared with the size of the rest of him, waved about helplessly as he looked.

“What’s happened to me?” he thought. It wasn’t a dream. His room, a proper human room although a little too small, lay peacefully between its four familiar walls. A collection of textile

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"What has happened to me?" he thought. It wasn't a dream. His room, a regular human room although a little too small, lay snugly on its four familiar walls. A cold shudder ran through

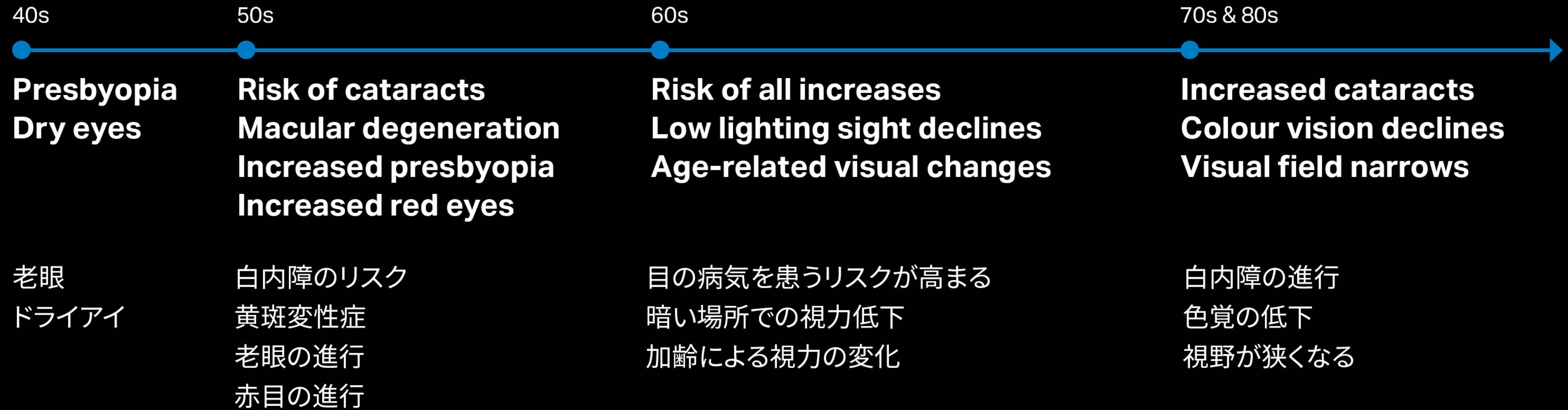
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"What has happened to me?" he thought. It wasn't a dream. His room, a large one for a bachelor and a single man, was cluttered in a way that was peculiar to him. It was like a collection of specimens pinned without regard to their mutual relations, and he was now alone to examine them in their chaotic order within their four familiar walls.

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Vision Impairment



Good Typographic Practice

タイポグラフィにできること

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One morning, when Gregor Samsa woke from troubled

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One morning, when Gregor Samsa woke from troubled

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One morning, when Gregor Samsa woke from troubled dreams,

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One morning, when Gregor Samsa woke from troubled

Good Typographic Practice: Unambiguous Letter Shapes

1 2 3 4 5 6 7 8 9 0

Q W E R T Y U I O P

A S D F G H J K L

Z X C V B N M

Good Typographic Practice: Unambiguous Letter Shapes



Good Typographic Practice: Unambiguous Letter Shapes



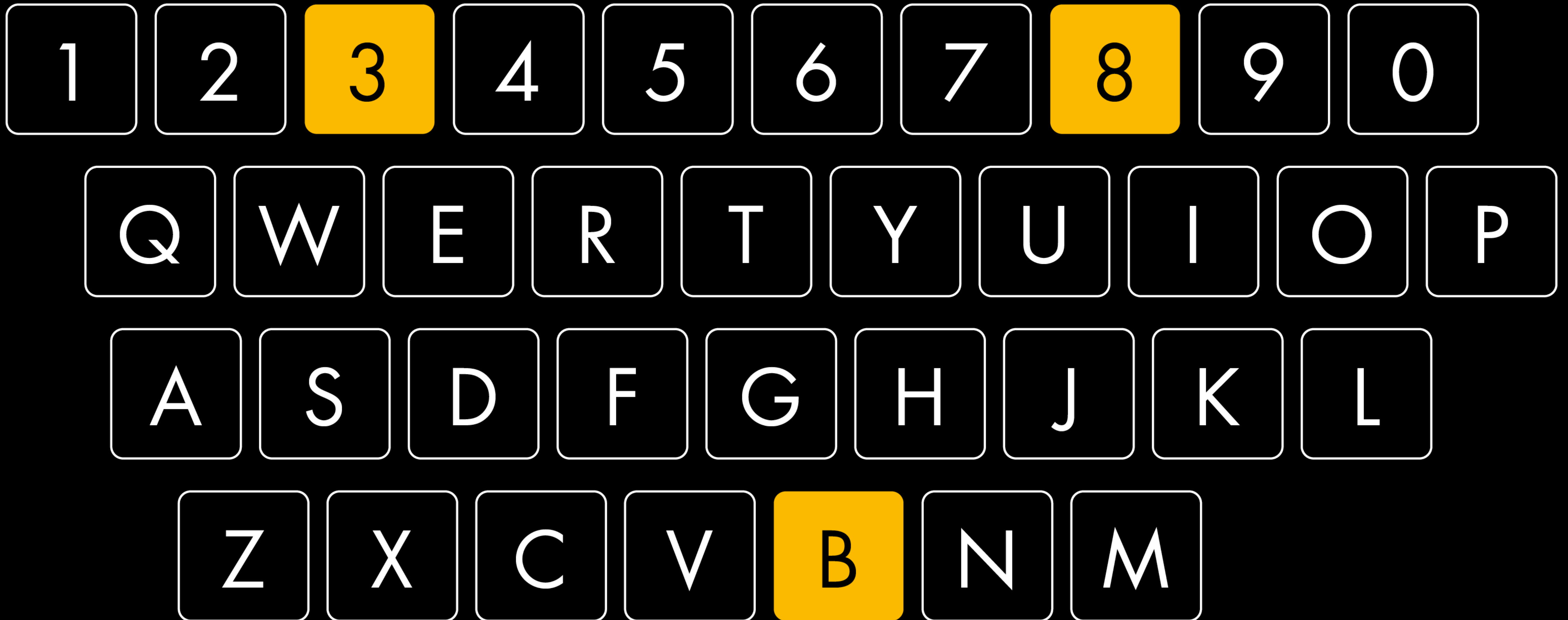
Good Typographic Practice: Unambiguous Letter Shapes



Good Typographic Practice: Unambiguous Letter Shapes

1	2	3	4	5	6	7	8	9	0
Q	W	E	R	T	Y	U	I	O	P
A	S	D	F	G	H	J	K	L	
Z	X	C	V	B	N	M			

Good Typographic Practice: Unambiguous Letter Shapes



clear—dear

burn—bum

skivvy—skiwy

KILLJOY—KILUOY

Macclesfield

Macclesfield

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Clear shift

Clear shift

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Good Typographic Practice: Heights

Cap height キャップハイ

x-height エックスハイ

Baseline ベースライン

On Ilford 1.0

Ascender zone アセンダーゾーン

x-height エックスハイ

Baseline ベースライン

On Ilford 1.0

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed and divided by arches into stiff sections. The bedding was hardly able to cover it and seemed ready

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x-height エックスハイ

Baseline ベースライン



Cap height キャップハイ

x-height エックスハイ

Baseline ベースライン



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himself transformed in his bed into a
horrible vermin. He lay on his armour-
like back, and if he lifted his head a
little he could see his brown body,
slightly curved and divided by arches
into stiff sections. The bedding was
hardly able to cover it and seemed
ready to slide off any moment. His
many legs, pitifully thin compared

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One morn-
ing, when
Gregor
Samsa
woke from
troubled
dreams, he
found him-
self trans-
formed in
his bed into

Stoke Newington

Stoke Newington

Stoke Newington

Stoke Newington

Stoke Newington

Stoke Newington

Stoke Newington

Stoke Newington

Stoke Newington

One morning, when
Gregor Samsa woke
from troubled dreams,
he found himself
transformed in his bed
into a horrible vermin.
He lay on his armour-
like back, and if he
lifted his head a little
he could see his brown
belly, slightly domed

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Gregor Samsa woke
from troubled dreams,
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transformed in his
bed into a horrible
vermin. He lay on his
armour-like back,
and if he lifted his
head a little he could
see his brown belly.

**One morning,
when Gregor
Samsa woke from
troubled dreams,
he found himself
transformed in his
bed into a horrible
vermin. He lay on
his armour-like
back, and if he
lifted his head a**

High / Low

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Hammersmith

Hammersmith

noon

n o o n n

One morning, when Gregor Samsa woke from troubled dreams, he found himself transformed in his bed into a horrible vermin. He lay on his armour-like back, and if he lifted his head a little he could see his brown belly, slightly domed

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「ではみなさんは、そういうふうには川だと言われたり、乳の流れたあとだと言われたりしていた、このぼんやりと白いものがほんとうは何かご承知ですか」先生は、黒板につるした大きな黒い星座の図の、上から下へ白くけぶった銀河帯のようなところを指しながら、みんなに問いをかけました。

カムパネルラが手をあげました。それから四、五人手をあげました。ジョバンニも手をあげようとして、急いでそのままやめました。たしかにあれがみんな星だと、いつか雑誌で読んだのですが、このごろはジョバンニはまるで毎日教室でもねむく、本を読むひまも読む本もないので、なんだかどんなこともよくわからないという気持ちがするのです。

ところが先生は早くもそれを見つけたのです。

「ジョバンニさん。あなたはわかっているのでしょうか」

ではみなさんは、そういうふうには川だと言われたり、乳の流れたあとだと言われたりしていた、このぼんやりと白いものがほんとうは何かご承知ですか」先生は、黒板につるした大きな黒い星座の図の、上から下へ白くけぶった銀河帯のようなところを指しながら、みんなに問いをかけました。

カムパネルラが手をあげました。それから四、五人手をあげました。ジョバンニも手をあげようとして、急いでそのままやめました。たしかにあれがみんな星だと、いつか雑誌で読んだのですが、このごろはジョバンニはまるで毎日教室でもねむく、本を読むひまも読む本もないので、なんだかどんなこともよくわからないという気持ちがするのです。

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「ジョバンニさん。あなたはわかっているのでしょうか」



東
あ
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M

Kanji
漢字

Hiragana
ひらがな

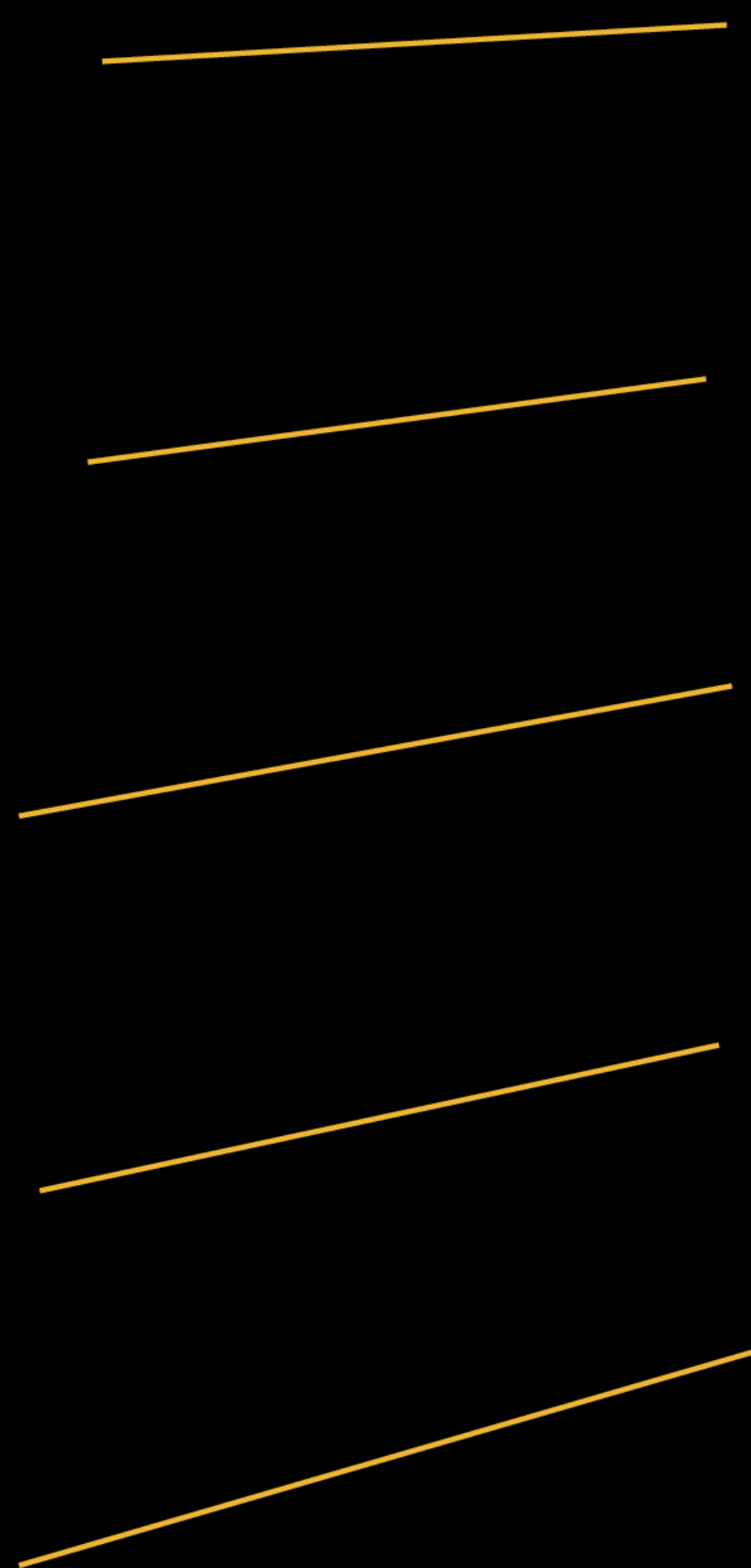
Katakana
カタカナ

Latin
アルファベット

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ところが先生は早くもそれを見つけたのでした。

「ジョバンニさん。あなたはわかっているのでしょうか」

ジョバンニは勢いよく立ちあがりましたが、立ってみるともうはっきりとそれを答えることができないのでした。ザネリが前の席からふりかえって、ジョバンニを見てくすっとわらいました。ジョバンニはもうどぎまぎしてまっ赤になってしまいました。先生がまた言いました。

「ではみなさんは、そういうふうに着だと言われたり、乳の流れたあとだと言われたりしていた、このぼんやりと白いものがほんとうは何かご承知ですか」先生は、黒板につるした大きな黒い星座の図の、上から下へ白くけぶった銀河帯のようなところを指しながら、みんなに問いをかけました。

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Consider the Audience

Consider the Usage

Follow Typographic Best Practice

読む人のことを考える

どう使われるのかを考える

良いタイポグラフィを実践する

Thank you
ありがとうございました