Marginalia

Write into the margins!

1 Setup

Put something akin to the following at the start of your .typ file:

```
#import "@preview/marginalia:0.2.2" as marginalia: note, notefigure, wideblock

#show: marginalia.setup.with(
    // inner: ( far: 5mm, width: 15mm, sep: 5mm ),
    // outer: ( far: 5mm, width: 15mm, sep: 5mm ),
    // top: 2.5cm,
    // bottom: 2.5cm,
    // book: false,
    // clearance: 12pt,
```

Where you can then customize these options to your preferences. Shown here (as comments) are the default values taken if the corresponding keys are unset.

If <u>book</u> is <u>false</u>, inner and outer correspond to the left and right margins respectively. If book is true, the margins swap sides on even and odd pages. Notes are placed in the outside margin by default.

See the appendix for a more detailed explanation of the setup() function and its options.

Additionally, I recommend using typst's partial function application feature to customize other aspects of the notes consistently:

```
#let note = note.with(/* options here */)
#let notefigure = notefigure.with(/* same options here */)
```

2 Margin-Notes

By default, the <code>#note[]</code> command places a note to the right/outer margin, like so:o. By giving the argument <code>side: "inner"</code>, we obtain a note on the inner (left) margin. If <code>setup.book</code> is <code>true</code>, the side will of course be adjusted automatically. It is also possible to pass <code>side: "left"</code> or <code>side: "right"</code> if you want a fixed side even in books.

If \diamond we place multiple notes in one pline, they automatically adjust their positions. Additionally, a dy argument can be passed to shift their initial position by that amount vertically. They may still get shifted around, unless configured otherwise via the shift parameter of #note[].

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 You can also skip the configuration step if you're happy with these defaults, but 15mm is not a lot to write in.

• This is a note.

They can contain any content, and will wrap within the note column.

♦ Note 1

Note 2

□ Note 3

▲ Note 4

△ Note 5

This note was given 15pt dy, but it was shifted more than that to avoid Notes 1–5.

 This note was given 10cm dy and was shifted less than that to stay on the page.

Reversed.

This note was given 15pt dy.

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Notes will shift vertically to avoid other notes, wideblocks, and the top page margin. It will attempt to move one note below a wide-block if there is not enough space above, but if there are multiple notes that would need to be rearranged you must assist by manually setting dy such that their initial position is below the wideblock.

Margin notes also fault, they are placed order as they appear work from within aligned with their anin the text, set keepmost containers such chor. To force the order: true on all as #block[]s or notes to appear in the notes whose relative #column[]s.o By demargin in the same order is important.

Note from second column.

- Lorem ipsum dolor sit.
- Like so. The lorem-ipsum note was also placed with keep-order.
 - This note has flush numbering.
- Unnumbered notes "avoid" being shifted if possible, preferring to shift other notes up.

Like this.

17 The -2pt in the #h() is there because #note() inserts a 2pt space.

Like this one.

18 (the <u>notecounter</u> is unaffected by the previous note, as it has <u>numbering</u>: <u>none</u>)

- Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do.
- Lorem ipsum dolor sit amet donsectetur adipiscing elit, sed do.

Lorem ipsum dolor sit.

2.1 Markers

The margin notes are decorated with little symbols, which by default hang into the gap. If this is not desired, set <u>flush-numbering</u>: true on the note.

Setting the argument <u>numbering</u>: <u>none</u>, we obtain notes without icon/number:

To change the markers, you can override the <u>numbering</u> function which is used to generate the markers.

Advanced Markers

If a different style is deisred for the marker in the text and in the margins, you can use the <u>anchor-numbering</u> parameter to control the intext marker:¹⁷

```
#note(
  numbering: (.., i) ⇒ text(font: "Inria Sans")[#i#h(0.5em - 2pt)],
  anchor-numbering: (.., i) ⇒ super[#i],
)[...]
```

Note that doing this implies <u>flush-numbering</u>: true. This is based on the assumption that if you have set two different numbering functions, you want to handle the placement yourself. Non-flush numbers, which are placed, complicate this.

This can also be used to create notes that have an anchor, but no numbering in the note itself.¹⁸

2.2 Styling

Both <u>note()</u> and <u>notefigure()</u> accept <u>text-style</u>, <u>par-style</u>, and <u>block-style</u> parameters:

- text-style: (size: 5pt, font: ("Iosevka Extended")) gives ♥
 par-style: (spacing: 20pt, leading: -2pt) gives ♥
- The default options here are meant to be as close as possible to the stock footnote style given 11pt text. For other text sizes, set the <u>text-style</u> size to 0.85 times your body text size if you want to match the stock footnotes.

block-style

To style the block containing the note body, use the <u>block-style</u> parameter.

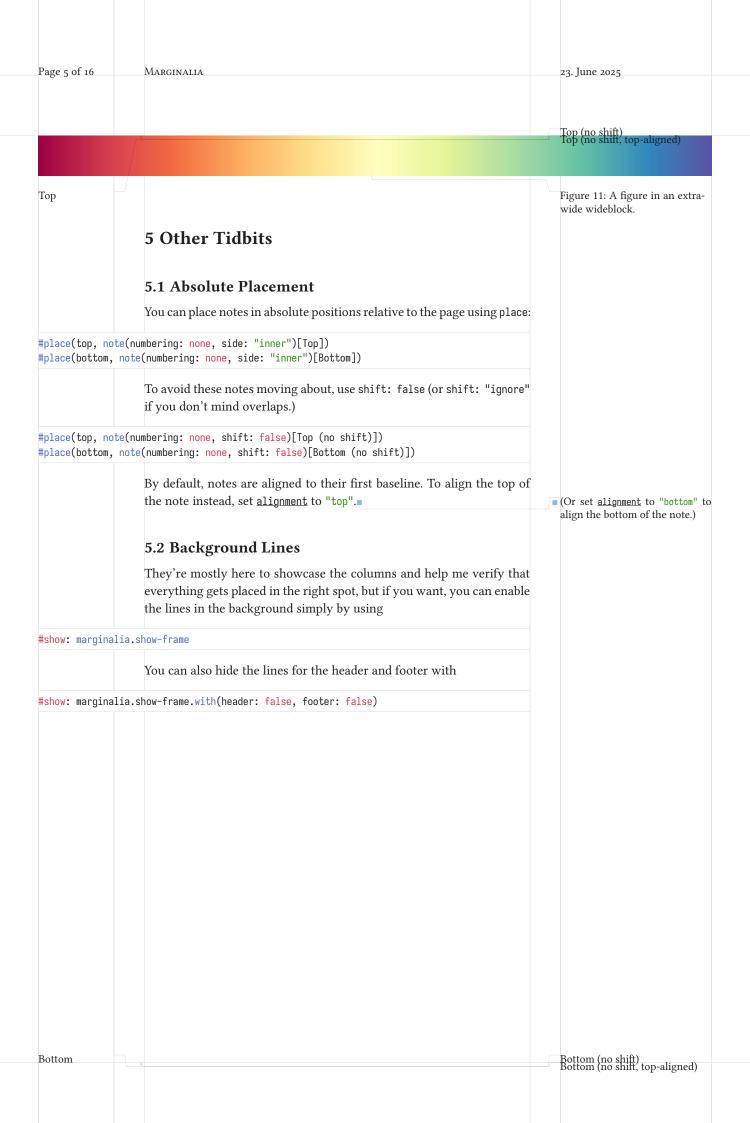
 block-style: (stroke: (top: (thickness: 0.5pt, dash: "dotted")), outset: (top: 6pt /* clearance is 12pt */), width: 100%) gives: This is a note with a dotted stroke above. block-style: (fill: oklch(90%, 0.06, 140deg), outset: (left: 10pt, So is this. rest: 4pt), width: 100%, radius: 4pt) gives: This is a note with block-style: (fill: oklch(90%, 0.06, 140deg), inset: (x: 4pt), a green background and outset: (y: 4pt), width: 100%, radius: 4pt) gives: flush-numbering: true. For more advanced use-cases, you can also pass a function as the block-So is this. style. It will be called with one argument, either "left" of "right", This is a note with an outset depending on the side the note will be placed on. Inside the function, green background. context is avaliable. ■ Purple 2 So is this. #let block-style = (side) \Rightarrow { Purple if side = "left" { (stroke: (left: none, rest: 0.5pt + purple), outset: (left: marginalia.get-left().far, rest: 4pt)) } else { (stroke: (right: none, rest: 0.5pt + purple), outset: (right: marginalia.getright().far, left: 9pt, rest: 4pt)) #note(block-style: block-style)[Purple] #note(side: "inner", block-style: block-style)[Purple 2] △ Unless they are given a dy argument moving them above the 3 Wide Blocks block. The command #wideblock[] can be used to wrap content in a wide block which spans into the margin-Note: when using an asyymetric page layout with setup.book: true, wideblocks which span across pagebreaks are messy, because there is no way for the wideblock to detect the pagebreak and adjust ist position after it. It is possible to use notes in a wide block: u.s. They will automatically shift downwards to avoid colliding ▲ Wow! with the wideblock. #wideblock(side: "inner")[...]: The <u>side</u> option allows extending the block into the inside □ Voila margin instead. This is analogous to the side option on notes and notefigures and allows placing notes in their usual column. In this manual, an inner wideblock is used to set the appendix to make it take up fewer ▼Notes above a #wideblock[] will pages. This is also why the appendix is no longer using setup.book: true. shift upwards if necessary. #wideblock(side: "both")[...]: Additionally, wideblocks can extend on both sides, for extra wide content. This is especially useful for figures, more on that below. 4 Figures 4.1 Notefigures For small figures, you can place them in the margin with #notefigure(). Figure 1: A notefigure. It accepts all arguments #figure() takes (except placement and scope), plus all arguments #note[] takes. However, by default it has no marker,

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23. June 2025 Marginalia Page 4 of 16 and to get a marker like other notes, you must pass numbering: marginalia.note-numbering, and it will get a marker like other notes: ▽ Figure 2: A marked notefigure. Additionally, the alignment parameter can now also be "caption-top", which results in alignment with the top of the caption. Figure 3: Aligned to top of cap-By default, like normal #note[]s, it uses alignment: "baseline" which leads to the caption's being aligned with the main text. A label can be attached to the figure using the <u>label</u> argument, as was • Figure 4: Aligned to top of figure with alignment: "top". done here for Figure 2. (Sadly, it is not possible to attach labels normally.) Notefigures can also be given <u>side</u>, <u>text-style</u>, <u>par-style</u>, and <u>block-</u> style parameters, - like #note[] - as is demonstrated in Figure 5. Figure 5: Styled Furthermore, the numbering, anchor-numbering, and flush-numbering parameters work as expected.33 33 Figure 6: Figure with custom numbering Note that #show figure.caption: /**/ rules are ignored for ♦ NB: show-caption expects a func-#notefigure[]s, use the show-caption parameter instead. tion with two arguments, check the docs. 4.2 Large Figures For larger figures, use the following set and show rules if you want topaligned captions: #set figure(gap: 0pt) // neccessary in both cases #set figure.caption(position: top) #show figure.caption.where(position: top): note.with(alignment: "top", anchor-numbering: none, numbering: none, shift: "avoid", keep-order: true) Figure 7: A figure. And if you want bottom-aligned captions, use the following: #set figure(gap: 0pt) // neccessary in both cases #set figure.caption(position: bottom) // (this is the default) #show figure.caption.where(position: bottom): note.with(alignment: "bottom", anchornumbering: none, numbering: none, shift: "avoid", keep-order: true) Figure 8: A figure. Wide Figures For wide figures, simply place a figure in a wideblock. The caption gets placed beneath the figure automatically, courtesy of regular wide-blockavoidance. (this is assuming you have one of the above show rules) #wideblock(figure(image(..), caption: [A figure in a wide block.])) Figure 9: A figure in a wide block. Figure 10: A figure in a reversed wide block.





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	6 Troubleshooting / Known Bugs	
	 If the document needs multiple passes to figure out page-breaks, it can break the note positioning. This can usually be resolved by placing a #pagebreak() or #pagebreak(weak: true) in an appropriate location. 	This can happen for example with outlines which barely fit/don't fit onto the page.
	 Relatedly, everything breaks if you try to use pages with width or height set to auto, as this package needs to know the actual measure- ments of the page to figure out where to place stuff. 	
• Notes on the	 Nested notes may or may not work. In nearly all cases, they seem to lead to a "layout did not converge within 5 attempts" warning, so it is probably best to avoid them if possible. 	In this manual, for example, it works fine (with warnings) here, but not on the first page.
other side are usually fine though.	 Just use multiple paragraphs in one note, or place multiple notes in the main text instead. If really neccessary, use shift: "ignore" on the nested notes and manually set dy. 	Probably because there aren't many other notes around.
	• If book is true, wideblocks that break across pages are broken. Sadly there doesn't seem to be a way to detect and react to page-breaks from within a block, so I don't know how to fix this.	
	• If you encounter anything else which looks like a bug to you, please create an "issue" on GitHub if no-one else has done so already.	
	7 Thanks	
	Many thanks go to Nathan Jessurun for their <u>drafting</u> package, which has served as a starting point and was very helpful in figuring out how to position margin-notes.	
	The wideblock functionality was inspired by the one provided in the <u>tufte-memo</u> template.	
	Also shout-out to tidy, which was used to produce the appendix.	
	(This project is not affiliated with https://marginalia-search.com/ , but that is also a cool project.)	

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A Detailed Documentation of all Exported Symbols

Breaking Changes

0.2.0

The functions configure() and page-setup() have been combined into one setup() function.

A.1 get-left

Returns a dictionary with the keys far, width, sep containing the respective widths of the left margin on the current page. (On both even and odd pages.)

Requires context.

Parameters

```
get-left() → dictionary
```

A.2 get-right

Returns a dictionary with the keys far, width, sep containing the respective widths of the right margin on the current page. (On both even and odd pages.)

Requires context.

Parameters

```
get-right() → dictionary
```

A.3 header

This generates a wideblock() and divides its arguments into three boxes sized to match the margin setup.

Parameters

```
header(text-style: dictionary, \langle ..args \rangle, even: array, odd: array) \rightarrow content
```

text-style: (:) dictionary Will be used to set the text style.

```
(..args) Positional
```

Up to three positional arguments. They are interpreted as (outer), (center)(outer), or (inner)(center)(outer), depending on how many there are.

```
even: () array
```

This is ignored if there are positional parameters or if setup.book is false.

Otherwise, it is interpreted as ((outer), (center), (inner)) on even pages.

Functions:

- get-left()
- get-right()
- header()
- note()
- note-numbering()
- notefigure()
- setup()
- show-frame()
- wideblock()

Variables:

- notecounter
- <u>note-markers</u>
- note-markers-alternating

Mostly internal.

Mostly internal.

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```
odd: () array
```

This is ignored if there are positional parameters.

Otherwise, it is interpreted as ((inner), (center), (outer)) on odd pages or, if setup.book is false, on all pages.

A.4 note

Create a marginnote. Will adjust it's position downwards to avoid previously placed notes, and upwards to avoid extending past the bottom margin.

Breaking Changes

0.1.5

- · reverse has been replaced with note.side.
- → use `side: "inner"` instead of `reverse: true`
- numbered has been replaced with note.numbering.
- \longrightarrow use `numbering: "none"` instead of `numbered: false` 0.2.2
- align-baseline has been replaced with note.alignment.
 - \rightarrow use `alignment: "top"` instead of `align-baseline: false`

Parameters

```
note(
    numbering: none function string,
    anchor-numbering: none auto function string,
    flush-numbering: auto boolean,
    side: auto "outer" "inner" "left" "right",
    alignment: "baseline" "top" "bottom",
    dy: length,
    keep-order: boolean,
    shift: boolean auto "avoid" "ignore",
    text-style: dictionary,
    par-style: dictionary,
    block-style: dictionary function,
    ⟨body⟩: content
)
```

Function or numbering-string to generate the note markers from the notecounter. If none, will not step the <u>notecounter</u>.

Examples:

- (..i) ⇒ super(numbering("1", ..i)) for superscript numbers
- (..i) ⇒ super(numbering("a", ..i)) for superscript letters
- marginalia.note-numbering.with(repeat: false, markers: ()) for small blue numbers

```
anchor-numbering: auto none or auto or function or string
```

Used to generate the marker for the anchor (i.e. the one in the surrounding text)

• If auto, will use the given note.numbering.

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Bottom

Baseline

o Top

flush-numbering: auto auto or boolean

Disallow note markers hanging into the whitespace.

• If auto, acts like false if note.anchor-numbering is auto.

```
side: auto or "outer" or "inner" or "left" or "right"
```

Which side to place the note. auto defaults to "outer". In non-book documents, "outer"/"inner" are equivalent to "right"/"left" respectively.

alignment: "baseline" "baseline" or "top" or "bottom"

Vertical alignment of the note.

- "bottom" aligns the bottom edge of the note with the main text baseline.
- "baseline" aligns the first baseline of the note with the main text baseline.
- "top" aligns the top edge of the note with the main text baseline.

dy: Opt length

Inital vertical offset of the note, relative to the alignment point. The note may get shifted still to avoid other notes depending on note.shift.

keep-order: false boolean

Notes with keep-order: true are not re-ordered relative to one another.

```
shift: auto boolean or auto or "avoid" or "ignore"
```

Whether the note may get shifted vertically to avoid other notes.

- true: The note may shift to avoid other notes, wide-blocks and the top/bottom margins.
- false: The note is placed exactly where it appears, and other notes may shift to avoid it.
- "avoid": The note is only shifted if shifting other notes is not sufficent to avoid a collision. E.g. if it would collide with a wideblock or a note with shift: false.
- "ignore": Like false, but other notes do not try to avoid it.
- auto: true if numbered, "avoid" otherwise.

```
text-style: (size: 9.35pt, style: "normal", weight: "regular") dictionary
```

Will be used to **set** the text style.

```
par-style: (spacing: 1.2em, leading: 0.5em, hanging-indent: 0pt) dictionary
```

Will be used to set the par style.

```
block-style: (width: 100%) dictionary or function
```

Will be passed to the block containing the note body. If this is a function, it will be called with "left" or "right" as its argument, and the result is passed to the block.

A.5 note-numbering

Format note marker

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Parameters

```
note-numbering(
markers: array(string),
repeat: boolean,
⟨...⟩,
⟨number⟩: int
) → content
```

markers: note-markers-alternating array(string)

```
#for i in array.range(1,15) [
    #note-numbering(markers: note-markers, i)
]\
#for i in array.range(1,15) [
    #note-numbering(markers: note-markers-
alternating, i)
]
```



repeat: true boolean

Whether to (true) loop over the icons, or (false) continue with numbers after icons run out.

```
#for i in array.range(1,15) [
    #note-numbering(repeat: true, i)
]\
#for i in array.range(1,15) [
    #note-numbering(repeat: false, i)
]
```



A.6 notefigure

Creates a figure in the margin.

Parameters numbering, anchor-numbering, flush-numbering, side, keep-order, shift, text-style, par-style, and block-style work the same as for note().

Breaking Changes

0.1.5

• reverse has been replaced with notefigure.side.

```
→ use `side: "inner"` instead of `reverse: true`
```

• numbered has been replaced with notefigure.numbering.

 \rightarrow use `numbering: marginalia.note-numbering` instead of `numbered: $\ensuremath{\text{true}}\xspace$ 0.2.2

• notefigure.dy no longer takes a relative length, instead notefigure.alignment was added.

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```
Parameters
  notefigure(
    numbering: none function string,
    anchor-numbering: none auto function string,
    flush-numbering: auto boolean,
    side: auto "outer" "inner" "left" "right",
    alignment: "baseline" "top" "bottom" "caption-top",
    dy: length,
    keep-order: boolean,
    shift: boolean auto "avoid" "ignore",
    text-style: dictionary,
    par-style: dictionary,
    block-style: dictionary function,
    show-caption: function,
    gap: length,
    label: none label,
    (content): content,
    ⟨..figureargs⟩: arguments
  ) → content
numbering: none
                 none or function or string
Same as note.numbering, but with different default value.
                         none or auto or function or string
anchor-numbering: auto
Used to generate the marker for the anchor (i.e. the one in the surrounding text)

    If auto, will use the given notefigure.numbering.

                       auto or boolean
flush-numbering: auto
Disallow note markers hanging into the whitespace.
• If auto, acts like false if note.anchor-numbering is auto.
             auto or "outer" or "inner" or "left" or "right"
side: auto
Which side to place the note. auto defaults to "outer". In non-book documents,
"outer"/"inner" are equivalent to "right"/"left" respectively.
alignment: "baseline"
                         "baseline" or "top" or "bottom" or "caption-top"
Vertical alignment of the notefigure.

    "top", "bottom" work the same as note.alignment.

• "baseline" aligns the first baseline of the caption with the main text baseline.
                                                                                                Figure 12: Baseline

    "caption-top" aligns the top of the caption with the main text baseline.

                                                                                                Figure 13: Caption-top
dy: Opt
          length
Inital vertical offset of the notefigure, relative to the alignment point.
The notefigure may get shifted still to avoid other notes depending on notefigure.shift.
text-style: (size: 9.35pt, style: "normal", weight: "regular")
                                                                   dictionary
Will be used to set the text style.
par-style: (spacing: 1.2em, leading: 0.5em, hanging-indent: 0pt)
                                                                     dictionary
```

Will be used to set the par style.

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```
block-style: (width: 100%) dictionary or function
```

Will be passed to the block containing the note body (this contains the entire figure). If this is a function, it will be called with "left" or "right" as its argument, and the result is passed to the block.

```
show-caption: (number, caption) ⇒ {
   number
   caption.supplement
[ ]
   caption.counter.display(caption.numbering)
   caption.separator
   caption.body
} function
```

A function with two arguments, the (note-)number and the caption. Will be called as the caption show rule.

If <u>notefigure.numbering</u> is <u>none</u>, number will be <u>none</u>.

```
gap: 0.55em length
```

Pass-through to #figure(), but used to adjust the vertical position.

label: none or label A label to attach to the figure.

```
(content) content Positional
```

The figure content, e.g. an image. Pass-through to #figure(), but used to adjust the vertical position.

```
(..figureargs) arguments Positional Pass-through to #figure().
```

A.7 setup

(E.g. caption)

This will update the marginalia config and setup the page with the provided config options. (This means this will insert a pagebreak.)

```
Use as
```

```
#show: marginalia.setup.with(/* options here */)
```

The default values for the margins have been chosen such that they match the default typst margins for a4. It is strongly recommended to change at least one of either inner or outer to be wide enough to actually contain text.

Breaking Changes

0.1.5

- numbering has been replaced with $\underline{\mathtt{note.numbering}}/\underline{\mathtt{notefigure.numbering}}.$

```
\rightarrow set `numbering: /**/` directly on your notes instead of via <u>setup()</u>. Use <u>#let</u> note = note.with(numbering: /**/) for consistency.
```

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• flush-numbers has been replaced by note.flush-numbering.

```
\rightarrow set `flush-numbering: true` directly on your notes instead of via <u>setup()</u>. Use <u>#let note = note.with(flush-numbering: /**/)</u> for consistency.
```

0.2.0

• This function does no longer apply the configuration partially, but will reset all unspecified options to the default. Additionally, it replaces the page-setup() function that was needed previously and is no longer called configure()

Parameters

```
setup(
  inner: dictionary,
  outer: dictionary,
  top: length,
  bottom: length,
  book: boolean,
  clearance: length,
  ⟨body⟩: content
)

inner: (far: 5mm, width: 15mm, sep: 5mm) dictionary
```

Inside/left margins.

- far: Distance between edge of page and margin (note) column.
- width: Width of the margin column.
- sep: Distance between margin column and main text column.

The page inside/left margin should equal far + width + sep.

If partial dictionary is given, it will be filled up with defaults.

```
outer: (far: 5mm, width: 15mm, sep: 5mm) dictionary
```

Outside/right margins. Analogous to inner.

```
top: 2.5cm length Top margin.

bottom: 2.5cm length Bottom margin.

book: false boolean
```

- If true, will use inside/outside margins, alternating on each page.
- If false, will use left/right margins with all pages the same.

```
clearance: 12pt length
```

Minimal vertical distance between notes and to wide blocks.

A.8 show-frame

Adds lines to the page background showing the various vertical and horizontal boundaries used by marginalia.

To be used in a show-rule:

```
#show: marginalia.show-frame
```

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Parameters

```
show-frame(
    stroke: color,
    header: boolean,
    footer: boolean,
    ⟨body⟩: content
  ) → content
stroke: 0.5pt + luma(90%)
                             color
Stroke for the lines.
#show: marginalia.show-frame.with(stroke: 2pt + red)
header: true
                            Set to false to hide the header line
               boolean
footer: true
               boolean
                            Set to false to hide the footer line
```

A.9 wideblock

Creates a block that extends into the outside/right margin.

Note: This does not handle page-breaks sensibly. If config.book = false, this is not a problem, as then the margins on all pages are the same. However, when using alternating page margins, a multi-page wideblock will not work properly. To be able to set this appendix in a many-page wideblock, this code was used:

```
#show: marginalia.setup.with(..config, book: false)
#wideblock(side: "inner")[...]
```

Breaking Changes

0.1.5

• reverse and double have been replaced with wideblock.side.

```
→ use `side: "inner"` instead of `reverse: true`
→ use `side: "both"` instead of `double: true`
```

Parameters

```
wideblock(
    side: auto "outer" "inner" "left" "right" "both",
    (body): content
) → content

ide: auto auto or "outer" or "inner" or "left" or "right" or "both"
```

Which side to extend into. auto defaults to "outer". In non-book documents, "outer"/"inner" are equivalent to "right"/"left" respectively.

A.10 notecounter counter

The counter used for the note icons.

Mostly internal.

If you use <u>note-numbering()</u> without <u>note-numbering.repeat</u>, it is recommended you reset this occasionally, e.g. per heading or per page.

Daga sé af sé	Marginalia	as Tuna asar	
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notecounter.ur	date(1)		
A.11 note-	markara		
	or note markers.		
("•", "•", "=	', "▲", "♥", "◇", "○", "□", "△", "♡")		
A 10 moto	manikana altamatina		
	markers-alternating		
	or note markers, alternating filled/outlined.		
("•", "0", "•	, "◇", "∎", "□", "▲", "△", "♥", "♡")		