1	The title
2	First Author <sup>1</sup> & Ernst-August Doelle <sup>1,2</sup>
3	<sup>1</sup> Wilhelm-Wundt-University
4	<sup>2</sup> Konstanz Business School

## Author Note

Add complete departmental affiliations for each author here. Each new line herein
 7 must be indented, like this line.

<sup>8</sup> Enter author note here.

5

The authors made the following contributions. First Author: Conceptualization,
Writing - Original Draft Preparation, Writing - Review & Editing; Ernst-August Doelle:
Writing - Review & Editing.

<sup>12</sup> Correspondence concerning this article should be addressed to First Author, Postal
 <sup>13</sup> address. E-mail: my@email.com

### Abstract

One or two sentences providing a basic introduction to the field, comprehensible to a
 scientist in any discipline.

Two to three sentences of more detailed background, comprehensible to scientists in related disciplines.

One sentence clearly stating the general problem being addressed by this particular
 study.

21 One sentence summarizing the main result (with the words "here we show" or their 22 equivalent).

Two or three sentences explaining what the **main result** reveals in direct comparison to what was thought to be the case previously, or how the main result adds to previous knowledge.

<sup>26</sup> One or two sentences to put the results into a more general context.

Two or three sentences to provide a **broader perspective**, readily comprehensible to a scientist in any discipline.

<sup>29</sup> *Keywords:* keywords

30 Word count: X

### The title

This text is for the body of the introduction. This is how you **bold** text. This is *italics*. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer fringilla orci odio, eget venenatis diam aliquet nec.<sup>1</sup> Vivamus sodales aliquam tortor ac scelerisque. Nullam laoreet est id dolor rhoncus bibendum. Etiam eleifend, tortor vel euismod ullamcorper, nunc enim lacinia eros, at semper nulla arcu eget est. Pellentesque dapibus euismod sem, sed sollicitudin nisi blandit ac. Quisque dapibus lorem id felis cursus, id placerat magna dapibus. Sed id nibh dictum, tristique nulla non, tempor ipsum.<sup>2</sup>

39

## First level header

In sit amet arcu congue, elementum tellus nec, pellentesque libero. Nulla facilisi.
Aenean ornare nisi eget lacus pulvinar, eget imperdiet massa dignissim. Aliquam scelerisque
ut libero sed condimentum. Sed ut consectetur justo.

### 43 Second level header

Quisque dapibus sem non fringilla volutpat. Sed finibus magna et eros pharetra posuere.
Nunc id elit metus. Mauris quis malesuada massa. Fusce et auctor felis. Aenean id sem ex.
Nulla viverra leo in quam cursus auctor. Nullam rutrum erat quis lobortis ullamcorper.

Third level header. Quisque dapibus sem non fringilla volutpat. Sed finibus magna
et eros pharetra posuere. Nunc id elit metus. Mauris quis malesuada massa. Fusce et auctor
felis. Aenean id sem ex. Nulla viverra leo in quam cursus auctor. Nullam rutrum erat quis
lobortis ullamcorper.

<sup>&</sup>lt;sup>1</sup> This is a footnote.

 $<sup>^2</sup>$  This is another footnote.

### Citations

Citations are similar to Latex. Place bibliographic entries in a .bib file, then link to the .bib file in the YAML above. This example uses example.bib. Use a reference manager like Zotero to export bib files for collections of manuscripts, or write them by hand, or copy and paste from google scholar.

An example of citing a paper with author year in parentheses (Crump & Logan, 2010).
Separate citation keys with semicolons to add multiple citations (Crump & Logan, 2010;
Jamieson, Hannah, & Crump, 2010).

To cite the author alone with year in parentheses use Crump and Logan (2010). To cite year only, use (2010).

To add a prefix to the citation (see also, Crump & Logan, 2010). To add a postfix (see also, Crump & Logan, 2010, for a review)

63

#### Equations

<sup>64</sup> Use Latex syntax for math equations by placing formulas between dollar signs.

65  $a^2 + b^2 = c^2$ 

<sup>66</sup> You should see a preview of the equation in RStudio if you hover over the equation.

Include equations inside Latex style syntax for cross-referencing. Note, this also illustrates that latex syntax can be written directly, and will be treated as Latex for compiling the output.

$$a_{i} = \left(\frac{\sum_{j=1}^{j=n} p_{j} \times M_{ij}}{\sqrt{\sum_{j=1}^{j=n} p_{j}^{2}} \sqrt{\sum_{j=1}^{j=n} M_{ij}^{2}}}\right)^{tau}$$
(1)

<sup>70</sup> Cross reference the equation like this, see Equation (1).

## External images

Using knitr::include\_graphics() is a versatile method for inserting external images. The file path is relative to the folder containing the .Rmd file for the manuscript. In this case, the logo.png file is in the same folder as manuscript.Rmd, so we simply locate the file directly.



Figure 1. An example external image.

The name for the codechunk above is **vertical**, which can later be used as a cross-reference to figure, see Figure 1.

## Experiment 1

```
78
```

# 79 Methods

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

- 82 Participants.
- 83 Material.
- <sup>84</sup> Procedure.

### TITLE

Data analysis. We used R (Version 3.6.0; R Core Team, 2019) and the R-packages
dplyr (Version 1.0.1; Wickham et al., 2019), ggplot2 (Version 3.2.0; Wickham, 2016),
kableExtra (Version 1.1.0; Zhu, 2019), nomnoml (Version 0.2.0; Luraschi, 2019), papaja
(Version 0.1.0.9997; Aust & Barth, 2018), tidyr (Version 1.1.1; Wickham & Henry, 2019), and

verticaltutorial (Version 0.0.0.9000; Crump, n.d.) for all our analyses.

## 90 **Results**

Content stored in R variables can be injected into the document. However, the R variables must be defined before they can be inserted. For example, the following code chunk assigns a values of 1 to a variable x.

Now, the content of this variable can be reported using an inline r code chunk as follows, the value of x is 1.

### Table 1

Mean Reaction Times and Standard Errors of the Mean for Experiment 3

	Cong	gruent	Incon	gruent
posture	RT	SEM	RT	SEM
Sit	822	17	941	18
Stand	808	15	904	15

Below are examples of writing the results using two methods. The first method is to report all of the values by hand. The second method is to embed the results of R variables into the reporting using papaja. Both results sections appear similar in the .pdf, so look at the .rmd file for this example to see how to use papaja.



*Figure 2*. Mean reaction times wth standard error bars as a function of Posture and Congruency for Experiment 3

# Table 2

ANOVA table for Experiment 3

Effect	F	$df_1$	$df_2$	MSE	p	$\hat{\eta}_G^2$
Posture	7.33	1	49	4,407.09	.009	.012
Congruency	342.45	1	49	1,684.39	< .001	.182
Posture $\times$ Congruency	8.96	1	49	731.82	.004	.003

#### TITLE

### <sup>100</sup> By hand reporting

Mean reaction times for each subject in each condition to a 2 (Congruency: congruent vs. incongruent) x 2 (Posture: Standing vs. Sitting) were submitted to a repeated measures ANOVA. Mean RTs in each condition are displayed in Table 1, and in Figure 2. The full ANOVA table is reported in Table 2.

There was a main effect of Congruency, F (1, 49) = 342.45, MSE = 1684.39, p < 0.001. Mean reaction times were slower for incongruent (922 ms) than congruent groups (815 ms).

There main effect of Posture was significant, F (1, 49) = 7.33, MSE = 4407.09, p = .009. Mean reaction times were slower for sitting (881 ms) than standing groups (855 ms).

The two-way interaction between Congruency and Posture was significant, F (1, 49) =8.96, MSE = 731.82, p < 0.004. The Stroop effect was 23 ms smaller in the standing than sitting conditions.

### <sup>112</sup> papaja reporting

There was a main effect of Congruency, F(1, 49) = 342.45, MSE = 1,684.39, p < .001,  $\hat{\eta}_G^2 = .182$ . Mean reaction times were slower for incongruent (922 ms) than congruent groups (815 ms).

There main effect of Posture was significant, F(1, 49) = 7.33, MSE = 4,407.09, p = .009,  $\hat{\eta}_G^2 = .012$ . Mean reaction times were slower for sitting (881 ms) than standing groups (855 ms).

The two-way interaction between Congruency and Posture was significant,  $F(1, 49) = 8.96, MSE = 731.82, p = .004, \hat{\eta}_G^2 = .003$ . The Stroop effect was 23 ms smaller in the standing than sitting conditions.

<sup>122</sup> Note, I used the apa\_print() function to automate reporting of the ANOVA statistics,

however in this example I did not automate reporting of the means. This would be possible
by separately computing the means of interest, and then reporting them using inline r
chunks.

 $_{126}$  Discussion

127

# General Discussion

128	References
129	Aust, F., & Barth, M. (2018). papaja: Create APA manuscripts with R Markdown.
130	Retrieved from https://github.com/crsh/papaja
131	Crump, M. J. C. (n.d.). Verticaltutorial: What the package does (one line, title case).
132	Crump, M. J. C., & Logan, G. D. (2010). Contextual control over task-set retrieval.
133	Attention, Perception & Psychophysics, 72(8), 2047–2053.
134	https://doi.org/10.3758/APP.72.8.2047
135	Jamieson, R. K., Hannah, S. D., & Crump, M. J. C. (2010). A memory-based account
136	of retrospective revaluation. Canadian Journal of Experimental Psychology, $64(3)$ ,
137	153–164. https://doi.org/10.1037/a0020886
138	Luraschi, J. (2019). Nomnoml: Sassy 'uml' diagrams. Retrieved from
139	https://CRAN.R-project.org/package=nomnoml
140	R Core Team. (2019). R: A language and environment for statistical computing.
141	Vienna, Austria: R Foundation for Statistical Computing. Retrieved from
142	https://www.R-project.org/
143	Wickham, H. (2016). Ggplot2: Elegant graphics for data analysis. Springer-Verlag
144	New York. Retrieved from https://ggplot2.tidyverse.org
145	Wickham, H., François, R., Henry, L., & Müller, K. (2019). Dplyr: A grammar of
146	data manipulation. Retrieved from https://CRAN.R-project.org/package=dplyr
147	Wickham, H., & Henry, L. (2019). Tidyr: Tidy messy data. Retrieved from
148	https://CRAN.R-project.org/package=tidyr
149	Zhu, H. (2019). KableExtra: Construct complex table with 'kable' and pipe syntax.

150 Retrieved from https://CRAN.R-project.org/package=kableExtra