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Daniel Vartanian

**{abnt}: Quarto format for ABNT theses and dissertations**

[City]  
2023

Daniel Vartanian

**{abnt}: Quarto format for ABNT theses and dissertations**

[Original/Revised version]

[Dissertation/Thesis] presented to the [School/Department] at [University], as part of the requirements for the degree of [Master of Science/Doctor of Science] by the [Graduate program].

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## **ERRATA SHEET**

This is the development version of the thesis (version <1.0.0). Any necessary corrections will be listed here after its approval.

[Dissertation/Thesis] by Daniel Vartanian, under the title **{abnt}: Quarto format for ABNT theses and dissertations**, presented to the [School/Department] at the [University], as part of the requirements for the degree of [Master of Science/Doctor of Science] by the [Graduate program], in the concentration area of [Area of concentration].

Approved on \_\_\_\_\_ , \_\_\_\_\_ .

Examination committee

Committee chair:

Prof. Dr. \_\_\_\_\_  
Institution \_\_\_\_\_

Examiners:

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Institution \_\_\_\_\_  
Evaluation \_\_\_\_\_

*To the worm that first gnawed on the cold flesh of my corpse,  
I dedicate, as a fond remembrance, these posthumous memories.*<sup>1</sup>

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<sup>1</sup> ASSIS, M. **Memórias póstumas de Brás Cubas** [The Posthumous Memoirs of Brás Cubas]. São Paulo: Companhia das Letras, 2014. ISBN 978-85-438-0163-6.

## ACKNOWLEDGEMENTS

I would like to acknowledge this awesome [Quarto format!](#) :)

*Nullius in verba*<sup>2</sup>

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<sup>2</sup> THE ROYAL SOCIETY. **History of the Royal Society**. Available from: <<https://royalsociety.org/about-us/history/>>. Visited on: 9 Sept. 2023.



## ABSTRACT

[Author's surname], [Author's forename(s) initial(s)]. **{abnt}: Quarto format for ABNT theses and dissertations**. 2023. 25p. [Dissertation/Thesis] ([Master of Science/Doctor of Science]) – [School/Department], [University], [City], 2023.

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**Keywords:** [Keyword 1]. [Keyword 2]. [Keyword 3].

## RESUMO

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**Palavras-chaves:** [Palavra-chave 1]. [Palavra-chave 2]. [Palavra-chave 3].

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## LIST OF ABBREVIATIONS AND ACRONYMS

### F

Subscript indicating a relation with work-free days

### W

Subscript indicating a relation with workdays

### MCTQ

Munich ChronoType Questionnaire

### MCTQ<sup>PT</sup>

Portuguese version of the MCTQ

### MEQ

Morningness-Eveningness Questionnaire

### MSF

Local time of mid-sleep on work-free days

### MSF<sub>sc</sub>

Chronotype proxy. The midpoint between sleep onset and sleep end on work-free days. A sleep correction (<sub>sc</sub>) is made when a possible sleep compensation related to a lack of sleep on workdays is identified.

### MSW

Local time of mid-sleep on workdays

## LIST OF SYMBOLS

For an extensive list of chronobiology related symbols, please refer to [Aschoff, Klotter, and Wever \(1965\)](#) and [Marques and Oda \(2012\)](#).

$\tau$

Period of a rhythm in free flow; only revealed under constant environmental conditions.

$T$

Zeitgeber period.

$\phi$

Phase

$\Delta\phi$

Phase shift

$+\Delta\phi$

Phase advance

$-\Delta\phi$

Phase delay

$\Psi$

Phase relation

## LIST OF TERMS AND DEFINITIONS

For an extensive list of chronobiology related terms and definitions, please refer to [Aschoff, Klotter, and Wever \(1965\)](#) and [Marques and Oda \(2012\)](#).

### Chronotype

Any kind of temporal phenotype ([EHRET, 1974](#); [PITTENDRIGH, 1993](#)). Usually, it refers to circadian phenotypes in a spectrum that goes from morningness to eveningness ([HORNE; OSTBERG, 1976](#); [ROENNEBERG](#); [WIRZ-JUSTICE; MERROW, 2003](#)). It can also be seen as an organism's phase of entrainment ([ROENNEBERG; ALLEBRANDT, et al., 2012](#)).

### Circadian rhythm

A rhythm with a period close to a day/24h, an approximation to the period of the earth's rotation ([PITTENDRIGH, 1960](#)). From the Latin *circā*, around, and *dies*, day ([LATINITIUM, 2023](#)). Example: the sleep-wake cycle.

### Complex system

There are several definitions. Here are some that I found to be of use:

- “Systems that don't yield to compact forms of representation or description” (David Krakauer apud [Mitchell \(2013\)](#))
- “A system of many interacting parts where the system is more than just the sum of its parts” (Mark Newman apud [Mitchell \(2013\)](#))
- Systems with many connected agents that interact and exhibit self-organization and emergence behavior, all without the need for a central controller (adapted from Camilo Rodrigues Neto's definition, supervisor of this thesis).
- Dialectics at its finest (my working definition).

### Entrainment

A shift and alignment of biological rhythms induced by a zeitgeber input ([KUHLMAN; CRAIG; DUFFY, 2018](#)). For example: a shift/alignment of an organism's circadian rhythm when exposed to light.

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## 1 INTRODUCTION

### Note

The text below is for demonstrative purposes only.

See <https://github.com/danielvartan/abnt> to learn more about this template.

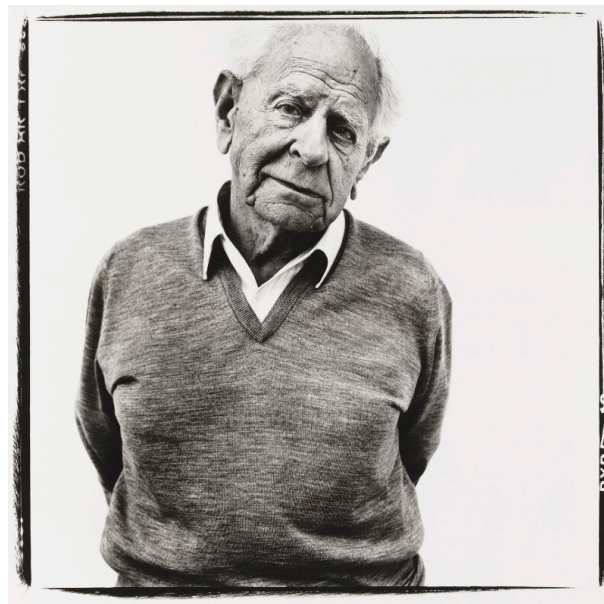
“The activity can be represented by a *general schema of problem-solving by the method of imaginative conjectures and criticism*, or, as I have often called it, by the *method of conjecture and refutation*. The schema (in its simplest form) is this

$$P_1 \rightarrow TT \rightarrow EE \rightarrow P_2$$

Here  $P_1$  is the *problem* from which we start, TT (the ‘tentative theory’) is the imaginative conjectural solution which we first reach, for example our first *tentative interpretation*. EE (*‘error-elimination’*) consists of a severe critical examination of our conjecture, our tentative interpretation: it consists, for example, of the critical use of documentary evidence and, if we have at this early stage more than one conjecture at our disposal, it will also consist of a critical discussion and comparative evaluation of the competing conjectures.  $P_2$  is the problem situation as it emerges from our first critical attempt to solve our problems. It leads up to our second attempt (*and so on*). A satisfactory understanding will be reached if the interpretation, the conjectural theory, finds support in the fact that it can throw new light on new problems — on more problems than we expected; or if it finds support in the fact that it explains many sub-problems, some of which were not seen to start with. Thus we may say that we can gauge the progress we have made by comparing  $P_1$  with some of our later problems ( $P_n$ , say).”

([POPPER, 1979](#), p. 164)

Figure 1 – Karl Popper (July 25, 1902 – September 17, 1994).  
One of the 20th century's most influential philosophers of science.



Fonte: [Steve Pyke](#).

## 1.1 SECONDARY SECTION

```

1 # library(datasets)
2 # library(dplyr)
3
4 datasets::iris ▷
5   dplyr::as_tibble() ▷
6   dplyr::slice_sample(n = 5) ▷
7   gt::gt()

```

test

Table 1 – A sample of the famous (Fisher's or Anderson's) iris data set

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
6.5	3.0	5.5	1.8	virginica

6.5	3.0	5.8	2.2	virginica
5.0	3.0	1.6	0.2	setosa
5.0	3.5	1.6	0.6	setosa
6.2	2.9	4.3	1.3	versicolor

---

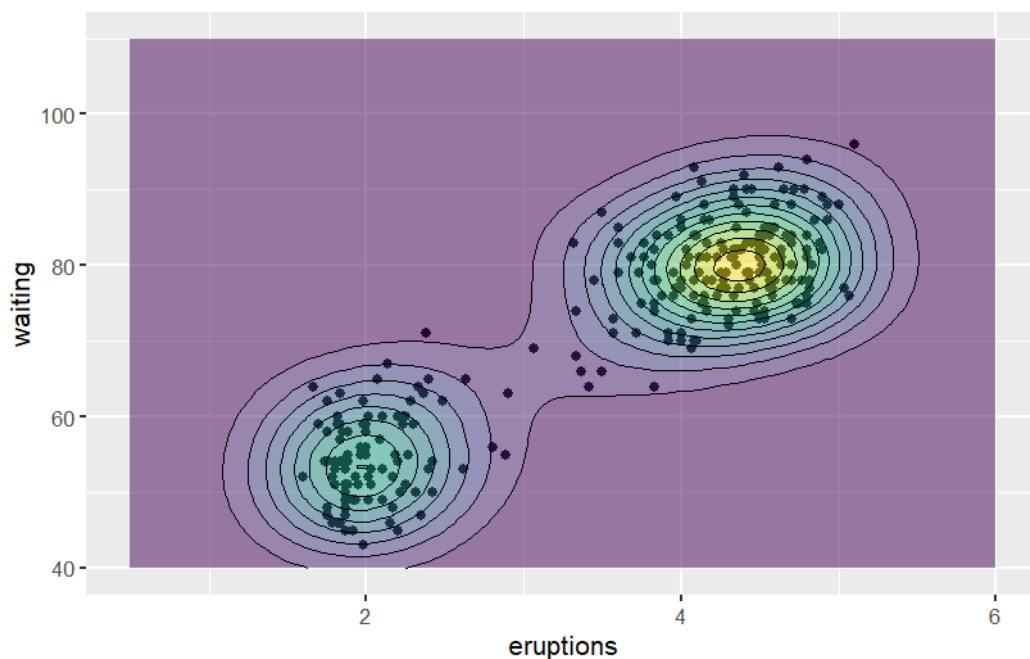
### 1.1.1 Tertiary section

```

1 # library(datasets)
2 # library(ggplot2)
3
4 ggplot2::ggplot(faithful, ggplot2::aes(x = eruptions, y = waiting)) +
5   ggplot2::geom_point() +
6   ggplot2::xlim(0.5, 6) +
7   ggplot2::ylim(40, 110) +
8   ggplot2::geom_density_2d_filled(alpha = 0.5) +
9   ggplot2::geom_density_2d(linewidth = 0.25, colour = "black") +
10  ggplot2::theme(legend.position = "none")

```

Figure 2 – Relationship between *waiting time to next eruption* (minutes) and *eruption time* (minutes) at Old Faithful Geyser, Yellowstone National Park, Wyoming, USA.



#### 1.1.1.1 Quaternary section

- Bullet point
  - Bullet point
    - \* Bullet point

#### 1.1.1.1.1 Quinary section

1. List
2. List
3. List

## 2 DEVELOPMENT

### Warning

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### 3 CONCLUSION

#### ! Important

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\* In accordance with ABNT style – Brazilian Association of Technical Standards.

## APPENDIX A – EXAMPLE

### Tip

The text below is for demonstrative purposes only.

See <https://quarto.org/docs/authoring/markdown-basics.html> to learn about the basics of Markdown's syntax.

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### A.1 SECONDARY SECTION

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## ANNEX A – EXAMPLE

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