

# Introduction

This document uses the following conventions when depicting graphical models:

- Shaded vertices represent observed random variables.
- Half-shaded vertices represent variables that can be either observed or random. Empty vertices represent latent random variables.
- Edges signify conditional dependency.
- Rectangles (“plates”) represent independent replication.

For an overview graphical models see Graphical models. M. I. Jordan. *Statistical Science (Special Issue on Bayesian Statistics)*, 19, 140-155, 2004. [PDF](#).

For a review of the probability distributions used by the scvi-tools models, see: F. William Townes *Review of Probability Distributions for Modeling Count Data* (2020).<sup>1</sup>

<sup>1</sup> Townes, “Review of Probability Distributions for Modeling Count Data,” 2020, <http://arxiv.org/abs/2001.04343>.

## References

Townes, F. William. “Review of Probability Distributions for Modeling Count Data,” 2020. <http://arxiv.org/abs/2001.04343>.