

Errata Sheet

February 25, 2025

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An error was introduced in Table 10.7 when it was in production between the proof and the printing of the textbook. The equations in the middle column did not format properly (text form). This has been corrected, but it may take a few weeks before they are incorporated into the PDF file and future printed copy. The correct equations are shown below.

Table 10.7 Traffic Variables and Equations

Variable	Equation	Note
Ln(Volume)	$\ln \left[\frac{\sum_{d=1}^n \left(\sum_{t=1}^m \text{Volume}_{5min,t} \right)_d}{n} \right]$	Volume _{5min} : Total volume in 5 minutes d = 1, 2, ..., n (# of days) t = 1, 2, ..., m (# of samples within a period)
Ln(Avg. Speed)	$\ln \left[\frac{\sum_{d=1}^n \left(\frac{\sum_{t=1}^m \text{AvgSpeed}_{5min,t}}{m} \right)_d}{n} \right]$	AvgSpeed _{5min} : Avg. speed in 5 minutes d = 1, 2, ..., n (# of days) t = 1, 2, ..., m (# of samples within a period)
Std. Deviation of Speed	$\frac{\sum_{d=1}^n \left[\sqrt{\frac{\sum_{t=1}^m \left(\text{AvgSpeed}_{5min,t} - \frac{\sum_{t=1}^m \text{AvgSpeed}_{5min,t}}{m} \right)^2}{m}} \right]_d}{n}$	d = 1, 2, ..., n (# of days) t = 1, 2, ..., m (# of samples within a period)
Avg. Occupancy	$\frac{\sum_{d=1}^n \left(\frac{\sum_{t=1}^m \text{AvgOccupancy}_{5min,t}}{m} \right)_d}{n}$	AvgOccupancy_{5min}: Avg. occupancy in 5 minutes d = 1, 2, ..., n (# of days) t = 1, 2, ..., m (# of samples within a period)
Std. Deviation of Occupancy	$\frac{\sum_{d=1}^n \left[\sqrt{\frac{\sum_{t=1}^m \left(\text{AvgOccupancy}_{5min,t} - \frac{\sum_{t=1}^m \text{AvgOccupancy}_{5min,t}}{m} \right)^2}{m}} \right]_d}{n}$	d = 1, 2, ..., n (# of days) t = 1, 2, ..., m (# of samples within a period)

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Middle of the paragraph: "...same subject/site is overserved over time..." should be "...is observed over..."

Bottom of the paragraph: after the sentence ending with "which is incorrect.", there is a sentence and references that were supposed to be added: "In medical research,

researchers who conduct before-after studies with patients do not separate models by year (see Cook and Wie, 2002; Cook and Wei, 2003; Tango, 2017).”

References:

Cook, R.J., W. Wei (2002) Selection effects in randomized trials with count data. *Statistics in Medicine*, Vol. 21, 515–531.

Cook, R.J., W. Wei (2003) Conditional analysis of mixed Poisson processes with baseline counts: implications for trial design and analysis. *Biostatistics*, Vol. 4, No. 3, 479–494.

Tango, T. (2017) *Repeated Measures Design with Generalized Linear Mixed Models for Randomized Controlled Trials*. Chapman & Hall, CRC Biostatistics Series, Boca Raton, FL.