* 1. Aggregation of data to macro level units runs the risk of the ecological fallacy, as you cannot infer that a macro association translates into the same micro effect.
  2. Disaggregation of data to micro level units runs the risk of the ecological fallacy, as you cannot infer that a macro association translates into the same micro effect.
  3. Aggregation of data to macro level units runs the risk of the ecological fallacy, as you cannot infer that a micro association translates into the same macro effect.
  4. Disaggregation of data to micro level units runs the risk of the ecological fallacy, as you cannot infer that a micro association translates into the same macro effect

1. In a random effects ANOVA, Yij = γ00 + u0j + εij
   1. γ00 is the fixed intercept term, u0j a residual at the individual level, and εij a random effect at the group level
   2. γ00 is the random intercept term, u0j a residual at the individual level, and εij a random effect at the group level
   3. γ00 is the random intercept term, u0j a random effect at the group level, and εij a residual at the individual level
   4. γ00 is the fixed intercept term, u0j a random effect at the group level, and εij a residual at the individual level
2. Random effects ANOVAs do not assume that
   1. u0j is normally distributed with a mean of 0 and variance
   2. εij is normally distributed with a mean of 0 and variance
   3. Residuals are normally distributed with a mean of 0 and variance
   4. Yij is normally distributed with a mean of 0 and variance
3. For a random effects ANOVA, the intra class correlation is:
   1. the proportion of variance explained by the group
   2. the correlation between two randomly drawn individuals in one randomly drawn group
   3. the variance of the intercept as a proportion of total variance
   4. All of the above
4. For this random intercept multilevel model, Yij = γ00 + γ10 Xij + u0j + εij
   1. There are two fixed and two random/residual effects
   2. There are three fixed and one random/residual effect
   3. There are one fixed and three random/residual effects
   4. There are four fixed effects.
5. Looking at Yij = γ00 + γ10Xij + u0j + εij
   1. If we removed or set γ00 to equal 0, we would have a random effects ANOVA
   2. If we removed or set γ10 to equal 0, we would have a random effects ANOVA
   3. If we removed or set u0 to equal 0, we would have a random effects ANOVA
   4. If we removed or set εij to equal 0, we would have a random effects ANOVA
6. Is Yij = γ00 + u0j + εij
   1. Simple regression
   2. A random effects ANOVA
   3. A random intercepts model
   4. A random slopes and random intercepts model
7. Is Yi = β1 + ei
   1. Simple regression
   2. A random effects ANOVA
   3. A random intercepts model
   4. A random slopes and random intercepts model
8. Is Yij = γ00 + γ10 Xij + u0j + u1j Xij + εij
   1. Simple regression
   2. A random effects ANOVA
   3. A random intercepts model
   4. A random slopes and random intercepts model
9. Is Yij = γ00 + γ10 Xij + u0j + εij
   1. Simple regression
   2. A random effects ANOVA
   3. A random intercepts model
   4. A random slopes and random intercepts model

The following output was obtained for a random intercept MLM:

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: HOSTILE ~ TSIG + (1 | COMPID)

Data: lq2002

REML criterion at convergence: 5671.1

Scaled residuals:

Min 1Q Median 3Q Max

-1.9626 -0.7132 -0.2692 0.4721 3.4835

Random effects:

Groups Name Variance Std.Dev.

COMPID (Intercept) 6.73567 2.5953

Residual 38.9866 6.2439

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 1.96414 0.07599 548.78434 25.85 <2e-16 \*\*\*

TSIG 2.33149 0.12147 1994.85949 -15.44 <2e-16 \*\*\*

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr)

TSIG -0.892

* 1. The ICC = .17 (i.e., 6.73567 / 38.9866)
  2. The ICC = .85 (i.e., 38.9866 / (6.73567 + 38.9866))
  3. The ICC = .15 (i.e., 6.73567 / (6.73567 + 38.9866))
  4. The ICC = 5.78 (i.e., 38.9866 / 6.73567)

1. 1. There is a positive association between “HOSTILE” and “TSIG”
   2. There is a positive association between intercept and ses.
   3. The groups’ slopes vary around a mean value of 2.33149
   4. None of the above.