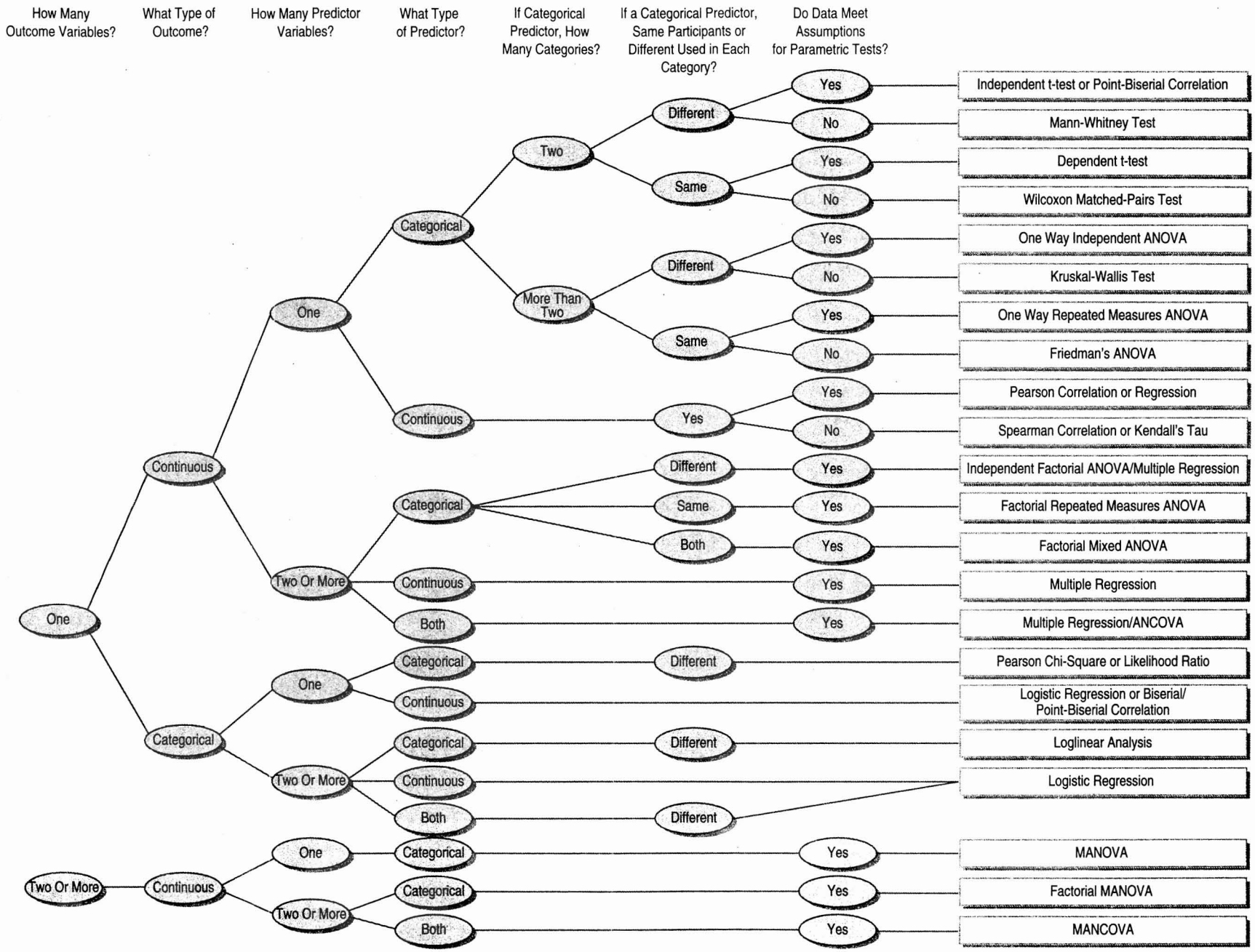
How Many Outcome Variables?
What Type of Outcome?
How Many Predictor Variables?
What Type of Predictor?
If Categorical Predictor, How Many Categories?
If a Categorical Predictor, Same Participants or Different Used in Each Category?
Do Data Meet Assumptions for Parametric Tests?
One
Continuous
One
Categorical
Two
Different
Yes
Independent t-test or Point-Biserial Correlation
No
Mann-Whitney Test
Same
Yes
Dependent t-test
No
Wilcoxon Matched-Pairs Test
More Than Two
Different
Yes
One Way Independent ANOVA
No
Kruskal-Wallis Test
Same
Yes
One Way Repeated Measures ANOVA
No
Friedman's ANOVA
Continuous
Yes
Yes
Pearson Correlation or Regression
No
Spearman Correlation or Kendall's Tau
Two Or More
Categorical
Different
Yes
Independent Factorial ANOVA/Multiple Regression
Same
Yes
Factorial Repeated Measures ANOVA
Both
Yes
Factorial Mixed ANOVA
Continuous
Yes
Multiple Regression
Both
Yes
Multiple Regression/ANCOVA
Categorical
One
Categorical
Different
Pearson Chi-Square or Likelihood Ratio
Continuous
Logistic Regression or Biserial/ Point-Biserial Correlation
Two Or More
Categorical
Different
Loglinear Analysis
Continuous
Logistic Regression
Both
Different
Two Or More
Continuous
One
Categorical
Yes
MANOVA
Two Or More
Categorical
Yes
Factorial MANOVA
Both
Yes
MANCOVA