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Bikini, Ghost and Curse

Bikini

"Statistics is like a bikini – what it reveals is interesting but what it conceals is vital." You know 95% CI reveals plausible values of a parameter (in a loose sense) but what is more important are the values outside CI, which are extremely unlikely. As a physician you may argue that you already know 95% of disease and your interest is in the remaining 5%. It is in this sense that you may think that statistics conceals the vital information just as bikini covers the vital parts of the body.

Ghost

Most statistical methods are so overly dependent on Gaussian distribution that they are considered under the shadow of Gauss. This phenomenon is sometimes referred to as ghost of Gauss haunting the statistical methods.

Although methods such as nonparametric and exact are developed yet transformations such as logarithm and inverse are still advocated to achieve Gaussianity. Statistics books are full of advice for larger *n* so as to exploit the central limit theorem. For this reason, for at least summative statistics, Gaussian distribution still remains the preferred form for statistical methods.

Curse

Kelvin propounded that if you can not quantitatively measure a characteristics, your knowledge about that characteristic is incomplete. For some, this is Curse of Kelvin. Indeed terms such as mild and severe form of disease are subjective expressions for the gradient that should be actually measured more exactly by a quantity. Scores such as apgar and APACHE are efforts to quantify qualitative features. Scores have pervaded deep into medical practice. Many more scores are being devised.

Reverse is also true. Blood pressure is measured quantitatively yet converted to 'quality' such as hypertension using a cut-off. Diabetes is the name given to certain level of fasting blood glucose level and glaucoma to intra-ocular pressure beyond a point. Although some ancillary information is also used for this categorization but the main criterion is quantitative cut-off. Decisions to start treatment of not, to operate of not, to admit or not, and to discharge or not, are qualitative and not quantitative.

"Do you know that almost everybody in this world has more than average number of hands."

"Head in an oven and feet in a freezer, the person is comfortable—on average."

"Most people die in bed: avoid bed to prolong life."