

## Details and Occam's Razor

Many years ago, when I decided to make handbooks for my karate students, I entitled them *Karate-do no Shosai (The Details of Karate-do)*. They certainly didn't show the details that my videos show or that I discussed in class, but they covered how and why we did basics, how we performed the kata and some basic applications for kata movements where most books at the time were missing the how and why and were light on the *bunkai*, to boot. Of course, had I illustrated every detail of every kata or every *bunkai*, it would have resulted in many volumes, about as many pages as Homer, Milton, and Melville put together. I had to choose the details I thought both relevant and helpful to students working their way up the ranks.

I am happy to say that in the 21<sup>st</sup> century, even if books are becoming passé, we are finally seeing some that cover details of karate and other martial arts. Whether the authors' choices of details are helpful or relevant to readers is entirely another question, however. If you read any of Jwing-ming Yang's books on Chinese systems or George Dillman's and Chris Thomas's books on *kyusho-jutsu*, you will find a lot of details, something I obviously approve of. If you try to learn from these books, however, you may be frustrated because you do not know what details are relevant to your interests and needs. Whenever an author or a teacher includes details, he must be mindful of a sort of informational Occam's Razor. In other words, redaction is as important as inclusion. [See my article *Editing & Art*.]

William of Occam (1288-1347 AD) came up with a simple statement, also known as The Law of Parsimony, that scientists have been guided by ever since, i.e. one should proceed to ever simpler theories until those theories can be traded for greater explanatory power. Neither a simpler nor a fuller explanation is necessarily better; the fullest simplest explanation is better.

In an attempt to offer the details of a martial arts technique, it is easy to get into minutia. The minutia often has to do with precision of form rather than functional application. Form is a shorthand way to trick a student into doing something functionally without having to explain it in detail, so form serves as that informational sort of Occam's Razor. Correct form is a standard edition of a technique that might nevertheless differ with every instance of application.

The form of a technique explains little by itself. Using several technique-forms to deduce a principle, however, can further simplify things and make the student independent of form, so she can apply what she knows to all relevant situations. But principle brings its own sort of detail. One needs to vary the detail of one's form to each partner in order to understand a principle correctly. Studying variation to fully understand principle is exactly why students profit from a dojo with different sizes and types of partners.

As we have discussed in a previous article (*A Teacher's Dilemma*), one cannot be complete and clear at the same time. A teacher must include just enough detail so the student learns more than she previously knew, but not so much detail as to make learning daunting. That is difficult to do in a book or video. An author can offer only his best guess at what his audience will bear. When I design a seminar that will often end up on DVD, I am

thinking simultaneously about the students who attend the seminar (their individual level of instruction, their arts, and how they might receive what I teach) and what I will need to show so that my concept, technique, or principle will be clear to the DVD viewer. If I expect to serve both those who attend our seminars and also those who purchase nearly everything we publish, I have to trim what I teach so that it stays helpful and relevant yet enrich the material so that it is worthy of a second or third viewing.

A master instructor (or author) has to consider both what he teaches and what he chooses to eliminate in order to make the learning experience profitable to the student. Occam's Razor is used both to cut away fat and to trim the meal into edible pieces.