The Angle Orthodontist: 10 Years Later

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In 2000, at the turn of the millennia, I arrived at the editor's desk and the stewardship of *The Angle Orthodontist*. This then 70 year old illustrious journal had a new steward—me, an editorially untested rookie. I thank that Foundation Board and those who were willing to take this risk for it has been a great ride.

In preparing for my interview, I remember searching the Internet and discovering that the publication world was in turmoil. The digital age was upon us and some aspects of the publication world were being dragged kicking into the new digital era.

Historically our journal had insisted upon receiving manuscript submissions as three paper copies—double spaced typewritten pages. A copy was mailed to two prospective reviewers, (our previous editor, Dave Turpin, had the foresight to bring us into the anonymous peer review system) and they mailed back their responses. The reviews were then mailed to the author who would revise and resubmit. At this point we were often ready to send the manuscripts were often ready to go to the printer. But typesetters were already a thing of the past. The printers were working in digital format so we required the authors to submit a floppy disc which we then sent to the printer.

What's wrong with this picture? Clearly if you need to end up in digital format, you might as well start in a digital format. Submission and review programs were just becoming available and we were early adopters of the one offered by our printer. This greatly accelerated the process and the manuscript submission number increased every year thereafter.

The next step was the transfer of all of our back issues on to the Internet. That was followed by an incredible jump in hits on our Website. The need was always out there—access was the problem. This number has stabilized at around three million hats per year. Where does all of this interest come from? It is surprisingly from areas you might not expect. Just look at the Table of Contents of our journal or any other orthodontic journal and you will find the emergence of very active programs all over the world. We receive manuscripts from over 50 different countries. Most recently we received one from Inner Mongolia! It is a global phenomenon!

This story is told to show how technology has been instrumental in moving science forward. Just look at the changes possible by Internet speed and convenience. I see it in the manuscripts we receive now compared to those we received 5 or more years ago. When you review the articles in old orthodontic journals, they were often largely descriptive and often freely mixed data with opinions.

The abstract is now structured and broken into discreet sections similar to the manuscript. An Objective is required and it must have a measurable or quantifiable goal. A null hypothesis is desirable. Fishing expeditions do not reliably contribute to ongoing scientific growth The Materials and Methods is a condensation of exactly what was done—no conjecture about its meaning or interpretation—and complete enough to allow the study to be reproduced. The Results report only specific objective data derived by the study. The Conclusions speak to the Objectives and do not repeat the Results.

The main body of the manuscript differs only in that there is an Introduction which tells why the study was conducted and its rationale. In addition, there is a discussion which places the findings into perspective in the state-of-the-art in that area and a compares the findings to similar reports in the literature.

We tend to publish Literature Reviews only as structured reviews. These differ from traditional reviews in that they are reproducible and become subject to meta analysis which allows combining data from similar past and future studies.

I continue to be impressed by the high levels of sophistication shown in the protocols from all over the globe. Orthodontics cannot help but gain from this interest and enthusiasm. No longer does one segment of the world hold a monopoly over all others.

What has happened? Why these concurrent real developments? Today we rely on the physical sciences and objective data in contrast to the experiential data of earlier years. The physical sciences have progressed furthest in their development. They are the most objective and consequently often need minimal discussion. The social sciences are less developed and often require much interpretation and discussion. Some of the strongest statistical programs have developed in the social sciences

because they are needed to establish the goodness of the data collected. The biological sciences occupy a middle ground and have progressed in many areas, but still have subjectivity in the interpretation of data.

If the past is prologue to the future, tomorrow looks great for orthodontics. History suggests an ever accelerating rate of progress as new technology emerges and we are well positioned to be part of this tsunami. It's a great time to be an orthodontist!