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Author's response

Thank you for your comments concerning my editorial, "Logically fallacious" (Macri JV. *Am J Orthod Dentofacial Orthop* 2019;155:155-6). You and I agree that there is a problem, not only in our profession but with society as well. Although I pointed out some thoughts that might change the tendency for the dental profession to think critically rather than react emotionally to the incredible amount of information we are exposed to, we both know this is never going to happen. As you pointed out, the philosopher Francis Bacon said that if a man begins his argument with a conclusion he will find all things he reads and sees as proof of his conclusion. Scientific method stresses the importance of starting with the argument or question, doing everything possible to disprove the question, and the result is not a certainty but a probability that the argument is correct. The intellectual roots of critical thinking are as ancient as its etymology, traceable in the literary record to the teachings of Socrates, 2,500 years ago. I agree that

the quotes do not reflect the origins of critical thinking and the fallacious reasoning that exists in society, but my intention was to present relatively contemporary comments as to relate to those not familiar with the teachings of the early philosophers.

I suggest that your "feeling" that there has been "a pendulum swing of the personal attributes that seem to prevail among some professionals," a shift from altruism to business, is an observation. You are making this statement based on preconceived biases that you have acquired because the people you are speaking of are not behaving as you think they should. That is not to say I disagree with you, but whether it is an accurate statement is a matter of opinion. The reality is that there are no truths, there are no absolutes, and what is true to a person is what the person believes to be true. What is considered to be true, what is considered to be ethical, may be different in the U.K. or the U.S. or the Middle East.

I am realistic enough to know that there really is no answer to the problem. I have taught at the high school and university levels for many years. Very little of what is taught is retained. What is ethical to one person may be unethical to another person. My editorial was an expression of my frustration of what I see happening in the profession and society over the 43 years that I have been practicing. I am sure that my comments will quietly fall to the wayside as the millions of other articles written on this subject have. I know I cannot change the world, I know I cannot convince someone to change their views that they believe. I do know that it is not true that seeing is believing, but rather that believing is seeing.

In an interesting TED Talk (www.youtube.com/watch?v=jobYTQTgeUE), "Why do we believe things that aren't true?" Philip Fernbach discussed a tweet by a rapper who goes by the stage name of B.o.B. His tweet went viral on the Internet when he tweeted out reasons why the Earth is flat. The astrophysicist Neil de Grasse Tyson tried to explain why what he believed just was not true. But B.o.B. was having none of that, he continued to argue that the Earth is flat. Believe it or not, B.o.B. is not the only one, there is a Flat Earth Society with roots going back to the early 1800s. Their motto is amazing: "We man the guns against oppression of thought and the Globularist lies of a new age." The word Globularist refers to "those nutty folks that think the earth is a sphere" and is not to be confused with Globalists.

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