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## Response

*To the Editor:*

Professor Harakal's criticism of Drs Bailey and Dick's article is valid in my opinion. Their article reflects a common misperception of the purpose and content of my 1975 article, "Proprioceptors and somatic dysfunction,"[1] cited by Drs Bailey and Dick. A similar misperception occurs in the excellent and prize-winning article by Dr Van Buskirk.[2] I think the first example of the misunderstanding was that of Dr Lawrence Jones, who adopted the hypothesis as the theoretical basis for strain-counterstrain.[3]

The problem has been that readers have given my 1975 article a much broader significance than I intended. It was never meant to be a comprehensive explanation of somatic dysfunction, that is, a "model of somatic dysfunction" as expressed by Drs Bailey and Dick. Nor did the article assert that the muscle spindle is the sole sensory input responsible for segmental facilitation. My article addressed only the *muscular component* of somatic dysfunction, namely, the basis for resistance to joint motion in specific planes and directions.

As for facilitation, I think it is an error to seek to ascribe it to this or that afferent input. As I have written in other *JAOA* articles, the central nervous system is continually receiving reports from countless sensory endings, receptors, and organs that *collectively* report on "what is going on out there." (Included, of course, are the nociceptive endings when trauma or pathologic change occurs.) The central nervous system responds adaptively according to the total picture.

However, when "static" occurs or conflicting reporting from different sources—such as joint receptors and muscle spindles indicating joint motion in opposite directions—the central nervous system cannot make an adaptive response to the garbled, unintelligible picture. It calls for a "hold-tight" response. Because the garbled sensory input is comparable to what happens at higher levels of the nervous system in seasickness, I have described somatic dysfunction as "vertigo at the spinal level." The "static" or "garbling" can be brought on by various afferent inputs or combinations thereof, including the proprioceptive, nociceptive, and many others such as those Dr Harakal mentions.

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1. Korr IM: Proprioceptors and somatic dysfunction. *JAOA* 1975;74:638-650.
2. Van Buskirk RL: Nociceptive reflexes and the somatic dysfunction: A model. *JAOA* 1990;90:792-809.
3. Jones LH: *Strain and Counterstrain.* Newark, Ohio, American Academy of Osteopathy, 1981.

## Reorganizing 'traditional' case presentation enhances learning, clinical experience

*To the Editor:*

In his article, "Case presentation as a teaching tool: Making a good thing better," (*JAOA* 1992;92:376-378), Dr Brose outlines the "traditional" approach to case presentation. The author states that a limitation of this approach is that it "does not permit the interns and residents to work through the problem in the same way as the managing physician did."

We agree that great limitations accompany the use of the traditional approach as outlined by Dr Brose. However, these limitations can be easily overcome by changing the order of presentation as outlined. Not only will changing the order of presentation enhance this method as a learning tool, but it will facilitate the development of a more logical approach to a particular diagnosis and treatment plan. It will also facilitate the development of a justifiable rationale for the ordering of various

tests and studies in this age of cost containment and managed healthcare.

In particular, we agree that the order of case material presentation should include the general statement; chief complaint; history of present illness; medical (including surgical) history; medication list; allergies; family history; social history; review of systems; physical examination; and summary findings. This point leads us to our area of disagreement. The order of presentation should continue with differential diagnosis, followed by laboratory investigations, including imaging studies; electrocardiogram, and other tests; working diagnosis; and management plans.

This modification in the order of presentation affords three major advantages, there by omitting the limitations cited by Dr Brose. First, the audience (students, interns, residents, and experienced clinicians) is given the case information in the same manner as the examining physician. In the forum of a clinical presentation, the audience is given the opportunity to think through the case as it was presented to the examining physician; that is, one obtains the chief complaint and then takes a history and performs a physical examination.

Second, the audience, as well as the examining physician, must then decide the most appropriate course of action based only on the interpretation of the chief complaint, history, and findings of the physical examination and presented in the form of a differential diagnosis. This action may include immediate emergency treatment and stabilization of the patient; or it may include ordering various diagnostic procedures to differentiate among the various possible diagnoses used to explain the physical findings and the chief complaint.

Such an endeavor allows audience members to develop their own clinical thought processes and interpretations. This point has both clinical and educational advantages.

Third, the ordering of diagnostic tests is based on a logical and clinically appropriate problem-solving format; that is, the differential diagnosis, which presents a logical basis on which to defend the ordering of expensive diagnostic tests. And, in this age of cost-containment, such justification is becoming an increasingly important aspect of medicine.

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## Response

*To the Editor:*

I appreciate the comments of student-physician Penney and Dr Russell. Many teacher/clinicians subscribe to the format that they outline. In fact, some medical educators have taken this reasoning a step further, periodically eliciting and modifying differential diagnoses throughout the presentation. One can effectively argue, for instance, that developing a differential diagnosis based on history is essential if one is to appropriately tailor a physical examination to an individual patient.

Clinician/teachers will inevitably differ on which system works best for them. The key is to select one system that teaches students to obtain, analyze, and convey information in a logical manner while exposing them to the reasoning process of the experienced clinician.

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