The screw coordinates in [B]—described in [A]—form a natural extension to the standard Plücker line coordinates; indeed they are a means of representing motors, a device the author himself is familiar with. Moreover the forms of loop-closure equations presented by Duffy and his co-workers in a number of papers (of which [4] is one) fairly readily allow the processing in matrix form of these screw coordinates by computer methods. Thence the isolating of identifiable special configurations in a spatial mechanism need not depend on formulating a technique specific to that mechanism; rather one follows a routine that can be adapted from the general to apply in any particular case. It is my hope that a demonstration to this effect will appear in print before long, and serve to counteract any suggestion that the theory of screw systems may be limited to revealing general principles. Furthermore, this technique has direct application in the growing field of manipulators.

In making these comments I do not mean to detract from the value of the paper; my intention, rather, is to focus attention on the way in which future investigations should tend.

Additional References


Authors’ Closure

Professor Hunt’s comments are valid and welcomed. In particular, I regret my looseness of terminology in referring at each instance to only "limit positions." I recommend references...
[5] and [A] unreservedly to the reader as the primary sources for a study of special configurations of linkages.

I am unconvinced, however, that there is no value in using the dimensional properties of a particular linkage to short-cut an analytical determination of its special configurations. There is in preparation an article which uses the screw motor approach of [1-3] to show that uncertainty configurations may be found as readily as stationary configurations by means of this technique, which is quite universal, but also takes advantage of any geometrical specialities of the linkage under consideration.