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**How dragging changes students' awareness: developing meanings for eigenvector and eigenvalue.**

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Summary: The complementary use of the theories of instrumental genesis and shifts of attention enabled me to obtain insights into students' understandings of the concepts of eigenvector and eigenvalue. My analysis suggests that the use of different dragging modalities can provide evidence of shifts in structure of a student's attention and consequently can reveal processes involved in her understanding of the concepts. Inversely, shifts in structure of her attention can result in her use of different dragging modalities. I also identified a new dragging modality – *intentionally* dragging – that is, to drag a point with the intention of producing a certain configuration.

*Classification:* H60

*Keywords:* eigenvalue; eigenvector; linear algebra

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